beyondblue
Depression. Anxiety.

A guide to what works for anxiety

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Contents

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What is anxiety?

Anxiety is more than just feeling stressed or worried. While stress and anxious feelings are a common response to a situation where a person feels under pressure, it usually passes once the stressful situation has passed, or 'stressor' is removed.

Anxiety is when these anxious feelings don't subside. Anxiety is when they are ongoing and exist without any particular reason or cause. It's a serious condition that makes it hard for a person to cope with daily life. We all feel anxious from time to time, but for a person experiencing anxiety, these feelings cannot be easily controlled.

The symptoms of anxiety can often develop gradually over time. Given that we all experience some anxiety, it can be hard to know how much is too much. In order to be diagnosed with anxiety, the condition must have a disabling impact on the person's life.

There are many types of anxiety. While the symptoms for each type are different, some general signs and symptoms include:

- feeling very worried or anxious most of the time
- finding it difficult to calm down
- feeling overwhelmed or frightened by sudden feelings of intense panic/ anxiety
- experiencing recurring thoughts that cause anxiety, but may seem silly to others
- avoiding situations or things which cause anxiety (e.g. social events or crowded places)
- experiencing ongoing difficulties (e.g. nightmares/ flashbacks) after a traumatic event.

For more information about symptoms of anxiety, see 'Types of anxiety, their signs and symptoms' overleaf, or visit **www.beyondblue.org.au/anxiety**

What causes anxiety?

It's often a combination of factors that can lead to a person developing anxiety.

Family history of mental health problems

People who experience anxiety may have a history of mental health problems in their family. However, this doesn't mean that a person will automatically develop anxiety if a parent or close relative has had a mental health condition.

Stressful life events

Stressful events can also trigger symptoms of anxiety. Common triggers include:

- job stress or changing jobs
- change in living arrangements
- pregnancy and giving birth
- family and relationship problems
- experiencing a major emotional shock following a stressful or traumatic event
- experiencing verbal, sexual, physical or emotional abuse or trauma
- death or loss of a loved one.

Physical health problems

Continuing physical illness can also trigger anxiety or complicate the treatment of the anxiety or the physical illness itself. Common conditions that can do this include:

- hormonal problems (e.g. overactive thyroid)
- diabetes
- asthma
- heart disease.

If there is concern about any of these conditions, ask a doctor for medical tests to rule out a medical cause for the feelings of anxiety.

Substance use

Heavy or long-term use of substances such as alcohol, cannabis, amphetamines or sedatives (such as benzodiazepines) can actually cause people to develop anxiety, particularly as the effects of the substance wear off. People with anxiety may find themselves using more of the substance to cope with withdrawal-related anxiety, which can lead to them feeling worse.

Types of anxiety, their signs and symptoms

There are many types of anxiety, with a range of signs and symptoms. It's important to note that the following are only guides to recognising different types of anxiety. They will not provide a diagnosis – for that you need to see a health professional.

Generalised anxiety disorder (GAD)

A person feels anxious on most days, worrying about lots of different things, over a period of six months or more.

For six months or more, on more days than not, have you:

- felt very worried
- found it hard to stop worrying
- found that your anxiety made it difficult to carry out everyday activities (e.g. work, study, seeing friends and family)?

If you answered 'yes' to all of these questions have you also experienced three or more of the following:

- felt restless or on edge
- felt tired easily
- had difficulty concentrating
- felt irritable
- had muscle pain (e.g. sore jaw or back)
- had trouble sleeping (e.g. difficulty falling or staying asleep or restless sleep)?

For more information see *beyondblue's Generalised anxiety disorder* fact sheet at **www.beyondblue.org.au/resources**

Social phobia (or social anxiety disorder)

A person with social phobia has an intense fear of criticism, being embarrassed or humiliated, even just in everyday situations, for example, public speaking, eating in public, being assertive at work or making small talk.

Have you:

- felt fear of one or more social or performance situations where you may be criticised
- avoided a situation or endured with anxiety and distress
- felt that the anxiety interferes with normal routine, working life, social functioning, or you are distressed about the problem
- felt that the fear is identified as unreasonable?

For more information see *beyondblue's Social phobia* fact sheet at **www.beyondblue.org.au/resources**

Specific phobias

A person feels very fearful about a particular object or situation and may go to great lengths to avoid the object or situation, for example, having an injection or travelling on a plane. There are many different types of phobias.

Have you:

- felt very nervous when faced with a specific object or situation e.g.:
  - flying on an aeroplane
  - going near an animal
  - receiving an injection
- avoided a situation that might cause you to face the specific phobia e.g.:
  - needed to change work patterns
  - not getting health check-ups
- found it hard to go about daily life (e.g. working, studying or seeing friends and family) because you are trying to avoid such situations?

For more information see *beyondblue's Specific phobias* fact sheet at **www.beyondblue.org.au/resources**

Panic disorder

A person has panic attacks, which are intense, overwhelming and often uncontrollable feelings of anxiety combined with a range of physical symptoms.

Within a 10 minute period have you felt four or more of the following:

- sweaty
- shaky
- increased heart rate
- short of breath
- choked
- nauseous or pain in the stomach
- dizzy, lightheaded or faint
- numb or tingly
- derealisation (feelings of unreality) or depersonalisation (feeling detached from yourself or your surroundings)
- hot or cold flushes
- scared of going crazy
- scared of dying?

If you answered 'yes' to all of these questions, have you also:

- felt scared, for one month or more, of experiencing these feelings again?

Having a panic attack does not always mean that a person will develop panic disorder. Some people may develop panic disorder after only a few panic attacks. Others may have many panic attacks without developing a panic disorder.

Some people who have panic attacks develop agoraphobia. They avoid situations because they worry about having a panic attack. They worry that it will be difficult or embarrassing to get away or that there will be no one to help them. Some people avoid situations like crowds, enclosed places such as shopping malls, or driving. Others may avoid leaving their homes altogether.

For more information see *beyondblue's Panic disorder* fact sheet at **www.beyondblue.org.au/resources**

Post-traumatic stress disorder (PTSD) and acute stress disorder (ASD)

PTSD and ASD can happen after a person experiences a distressing and traumatic event (e.g. war, assault, accident, disaster). They may have experienced the event or seen it happen to someone else. They also react with intense fear, helplessness or horror.

PTSD is diagnosed when a person has symptoms for at least a month. Have you:

- experienced or seen something that involved death, injury, torture or abuse and felt very frightened or helpless
- had upsetting memories or dreams of the event for at least one month
- found it hard to go about daily life (e.g. difficulty working, studying or getting along with family and friends)?

If you answered 'yes' to all of these questions have you also experienced at least three of the following:

- avoided activities that are a reminder of the event
- had trouble remembering parts of the event
- felt less interested in doing things you used to enjoy
- had trouble feeling intensely positive emotions (e.g. love or excitement)
- thought less about the future (e.g. about career or family goals)?

and have you experienced at least two of the following:

- had difficulty sleeping (e.g. had bad dreams or found it hard to fall or stay asleep)
- become angry or irritated easily
- had trouble concentrating
- felt on guard
- been easily startled?

For more information see *beyondblue's Post-traumatic stress disorder* fact sheet at **www.beyondblue.org.au/resources**

Obsessive compulsive disorder (OCD)

A person has ongoing unwanted/intrusive thoughts and fears that cause anxiety. Although the person may acknowledge these thoughts as silly, the person often finds him or herself trying to relieve their anxiety by carrying out certain behaviours or rituals. For example, a fear of germs and contamination can lead to constant washing of hands and clothes.

Have you:

- had repetitive thoughts or concerns that are not about real life problems (e.g. thoughts that you or people close to you will be harmed)
- performed the same activity repeatedly and in a very ordered, precise and similar way each time e.g.:
  - constantly washing hands or clothes, showering or brushing teeth
  - constantly cleaning, tidying or rearranging in a particular way things at home, at work or in the car
  - constantly checking that doors and windows are locked and/or appliances are turned off
- felt relieved in the short term by doing these things, but soon felt the need to repeat them
- recognised that these feelings, thoughts and behaviour patterns are unreasonable
- found that these thoughts or behaviour patterns take up more than one hour a day and/or interfered with your normal routine (e.g. working, studying or seeing friends and family)?

For more information see *beyondblue's Obsessive compulsive disorder* fact sheet at **www.beyondblue.org.au/resources**

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is a handbook published by the American Psychiatric Association and is used by health professionals in many countries around the world as a guide to the diagnosis of mental disorders. The DSM is periodically reviewed and in May 2013, DSM-5 (an update on DSM-IV) was released.

The DSM-5 chapter on anxiety disorders no longer includes obsessive compulsive disorder (which is included with the obsessive compulsive and related disorders) or post-traumatic stress disorder and acute stress disorder (which is included with the trauma and stressor-related disorders). However, the DSM-5 does reflect the close relationships among anxiety, OCD and PTSD.

Mixed anxiety, depression and substance abuse

Many people have symptoms of more than one type of anxiety. In addition, it is not uncommon for depression and anxiety to occur together – over half of those who experience depression also experience symptoms of anxiety – and in some cases, one can lead to the onset of the other.

Substance abuse also frequently occurs with anxiety. People may use alcohol or other drugs to try to help them cope. However, alcohol and other drug use can lead to increased anxiety.

Anxiety is common, but often untreated

Anxiety is the most common mental health condition in Australia. On average, one in four people – one in three women and one in five men – will experience an anxiety disorder at some stage in their life.[1]

A national survey of the mental health of Australians was carried out in 2007. This survey asked people about a range of symptoms of anxiety disorders and other mental health problems. A special computer program was used to make a diagnosis based on the answers provided. Shown below are the percentages of people found to be affected by particular types of anxiety in any given year. Specific phobias were not asked about.

Percentage of Australians aged 16 years or over affected by anxiety[1]

Type of disorder	Percentage affected in previous 12 months	Percentage affected at any time in their life
Post-traumatic stress disorder	6.4%	12.2%
Social phobia	4.7%	10.6%
Agoraphobia	2.8%	6.0%
Generalised anxiety disorder	2.7%	5.9%
Panic disorder	2.6%	5.2%
Obsessive compulsive disorder	1.9%	2.8%

Although anxiety is common, many people affected do not get treatment. In the national survey, many of those who had anxiety in the previous 12 months did not receive any professional help.

Who can assist?

Different health professionals (such as GPs, psychologists and psychiatrists) offer different types of services and treatments for anxiety. Below is a guide to the range of practitioners available and what kind of treatment they provide.

General Practitioners (GPs)

GPs are the best starting point for someone seeking professional help. A good GP can:

- make a diagnosis
- check for any physical health problem or medication that may be contributing to the anxiety
- discuss available treatments
- work with the person to draw up a Mental Health Treatment Plan so he or she can get a Medicare rebate for psychological treatment
- provide brief counselling or, in some cases, talking therapy
- prescribe medication if appropriate
- refer a person to a mental health specialist such as a psychologist or psychiatrist.

Before consulting a GP about anxiety, it's important to ask the receptionist to book a longer or double appointment, so there is plenty of time to discuss the situation without feeling rushed. It is also a good idea to raise the issue of anxiety early in the consultation. Some GPs are better at dealing with mental health conditions than others. The GP will discuss various treatment options and take the person's treatment preferences into account.

It is recommended that people consult their regular GP or another GP in the same clinic, as medical information is shared within a practice. For those without a regular GP or clinic, there is a list of GPs with expertise in treating common mental health problems available from **www.beyondblue.org.au** or by calling **1300 22 4636.**

Psychologists

Psychologists are health professionals who provide psychological therapies (talking therapies) such as cognitive behaviour therapy (CBT) and interpersonal therapy (IPT). Clinical psychologists specialise in the assessment, diagnosis and treatment of mental health conditions. Psychologists and clinical psychologists are not doctors and cannot prescribe medication in Australia.

It is not necessary to have a referral from a GP or psychiatrist to see a psychologist. However, a Mental Health Treatment Plan from a GP is needed to claim rebates through Medicare. If you have private health insurance and extras cover, you may be able to claim part of a psychologist's fee. Contact your health fund to check.

Psychiatrists

Psychiatrists are doctors who have undergone further training to specialise in mental health. They also specialise in the assessment, diagnosis and treatment of mental health conditions. They can make medical and psychiatric assessments, conduct medical tests, provide therapy and prescribe medication. Psychiatrists often use psychological treatments such as cognitive behaviour therapy (CBT), interpersonal therapy (IPT) and/or medication. If the anxiety is severe and hospital admission is required, a psychiatrist will be in charge of the person's treatment.

A referral from a GP is needed to see a psychiatrist. Rebates can also be claimed through Medicare.

A GP may suggest the person sees a psychiatrist if:

- the nature of the anxiety is unclear
- the anxiety is severe
- the anxiety lasts for a long time, or comes back
- the anxiety is associated with a high risk of self-harm
- the anxiety has failed to respond to treatment
- the GP thinks that he or she doesn't have the appropriate skills required to treat the person effectively.

Mental health nurses

Mental health nurses are specially trained to care for people with mental health conditions. They work with psychiatrists and GPs to review the state of a person's mental health and monitor their medication. They also provide people with information about mental health conditions and treatment. Some have training in psychological therapies. For a referral to a mental health nurse who works in a general practice, ask your GP.

Accredited Mental Health Social Workers

Accredited Mental Health Social Workers specialise in working with and treating mental health conditions, such as depression and anxiety. Many Accredited Mental Health Social Workers are registered with Medicare to provide focused psychological strategies, such as CBT, IPT, relaxation training, psycho-education and interpersonal skills training.

Occupational therapists in mental health

Occupational therapists in mental health help people who have difficulty functioning because of a mental health condition (such as anxiety or depression) to participate in normal, everyday activities. They can also provide focused psychological strategies.

Medicare rebates are also available for individual or group sessions with social workers and occupational therapists in mental health.

Aboriginal and Torres Strait Islander health workers

Aboriginal and Torres Strait Islander health workers are health workers who understand the health issues of Indigenous people and what is needed to provide culturally-safe and accessible services. Some workers may have undertaken training in mental health and psychological therapies. Support provided by Aboriginal and Torres Strait Islander health workers might include, but not be limited to, case management, screening, assessment, referrals, transport to and attendance at specialist appointments, education, improving access to mainstream services, advocacy, counselling, support for family and acute distress response.

Counsellors

'Counsellor' is a generic term used to describe various professionals who offer some type of talking therapy. A counsellor may be a psychologist, nurse, social worker, occupational therapist, or they may have a specific counselling qualification such as a Bachelor or Master of Counselling degree. Counsellors can work in a variety of settings, including private practices, community health centres, schools and universities and youth services.

A counsellor can talk through different problems you may be experiencing and look for possible solutions. However, it is important to note that not all counsellors have specific training in treating mental health conditions like depression and anxiety.

While there are many qualified counsellors who work across different settings, unfortunately, anyone can call themselves a 'counsellor', even if they don't have training or experience. For this reason, it's important to ask for information about the counsellor's qualifications and whether they are registered with a state board or a professional society. It is also important to note that only psychologists, social workers or occupational therapists are eligible to be registered with Medicare to provide services that attract a Medicare rebate.

Complementary health practitioners

There are many alternative and complementary treatment approaches for anxiety. However, many of these services are not covered by Medicare. Some services may be covered by private health insurance. If you don't have private health insurance, you may have to pay for these treatments. When seeking a complementary treatment, it is best to check whether the practitioner is registered by a state Registration Board or a professional society. It is a good idea to make sure the practitioner uses treatments which are supported by evidence that shows they are effective.

Do you live in a rural or remote area?

People living in rural and remote communities may find it difficult to access the mental health professionals listed here. If a General Practitioner or other mental health professional is not readily available, there are a number of help and information lines that may be able to assist and provide information or advice. For people with internet access, it may also be beneficial in some cases to try online e-therapies.

The cost of getting treatment for anxiety from a health professional varies. However, in the same way that people can get a Medicare rebate when they see a doctor, they can also get part or all of the consultation fee subsidised when they see a mental health professional for treatment of depression. It's a good idea to find out the cost of the service and the available rebate before making an appointment. The receptionist should be able to provide this information.

How family and friends can help

Family members and friends play an important role in a person's recovery. They can offer support, understanding and help, and can assist the person to get appropriate professional help.

When someone you care about is experiencing anxiety, it can be hard to know what the right thing is to do. Sometimes, it can be overwhelming and can cause worry and stress. It is very important that you take the time to look after yourself and monitor your own feelings if you're supporting a friend or family member who is experiencing anxiety.

Information about anxiety and practical advice on how to help someone you are worried about is available at **www.beyondblue.org.au** The *beyondblue Guide for carers* booklet gives information on supporting and caring for a person with anxiety or depression. *beyondblue* also has a range of helpful resources, including fact sheets, booklets, wallet cards and DVDs about anxiety and depression, available treatments and where to get help – go to **www.beyondblue.org.au/resources**

How to use this booklet

There are many different approaches to treating anxiety. These include medical treatments (such as medications or medical procedures), psychological therapies (including 'talking therapies') and self-help (such as complementary and alternative therapies or lifestyle approaches).

All of the approaches included in this booklet have been investigated as possible 'treatments' for anxiety – see 'How this booklet was developed' on page 12. However, the amount of evidence supporting the effectiveness of different interventions can vary greatly. In addition, some of the approaches listed are not available or used as treatments – for example, kava is not readily available in Australia but it has been used in research studies to see if it reduces anxiety.

This booklet provides a summary of what the scientific evidence says about each approach. Even when an intervention is shown to have some effect in research this does not mean it is available, used in clinical practice, or will be recommended or work equally well for every person. There is no substitute for the advice of a mental health practitioner, who can advise on the best available treatment options.

We have rated the evidence for the effectiveness of each intervention covered in this booklet using a 'thumbs up' scale:

	There are a lot of good quality studies showing that the approach works.
	There are a number of studies showing that the intervention works, but the evidence is not as strong as for the best approaches.
	There are at least two good studies showing that the approach works.
	The evidence shows that the intervention does not work.
	There is not enough evidence to say whether or not the approach works.
	The intervention has potential risks, mainly in terms of side-effects.

When a treatment is shown to work scientifically, this does not mean it will work equally well for every person. While it might work for the average person, some people will have complications, side-effects or incompatibilities with their lifestyle. The best strategy is to try an approach that works for most people and that you are comfortable with. If you do not recover quickly enough, or experience problems with the treatment, then try another.

Another factor to consider is beliefs about treatment. A treatment is more likely to work if a person believes in it and is willing to commit to it.[2,3,4] Even the most effective treatments will not work if they are used sometimes or half-heartedly. Some people have strong beliefs about particular types of treatment. For example, some do not like taking medications in general, whereas others have great faith in medical treatments. However, strong beliefs in a particular treatment may not be enough, especially if there is no good evidence that the treatment works.

This booklet provides a summary of what the scientific evidence says about different approaches that have been studied to see if they reduce depression. The reviews in this booklet are divided into the following sections:

Psychological interventions

These therapies can be provided by a range of health practitioners, but particularly psychologists, clinical psychologists and psychiatrists.

Medical interventions

These interventions are generally provided by a doctor (usually a GP or a psychiatrist).

Complementary and lifestyle interventions

These approaches can be provided by a range of health practitioners, including complementary health practitioners. Some of them can be used as self-help.

Interventions that are not routinely available

Approaches that are not currently available or used as a treatment for anxiety, but have been used in research studies.

Within each of these areas, we review the scientific evidence for each intervention to determine whether or not they are supported as being effective.

We recommend that people seek treatments that they believe in and are also supported by evidence. Whatever treatments are used, they are best done under the supervision of a GP or mental health professional. This is particularly important where more than one treatment is used. Often combining treatments that work is the best approach. However, sometimes there can be side-effects from combinations, particularly prescribed or complementary medications.

How this booklet was developed

Searching the literature

To produce these reviews, the scientific literature was searched systematically on the following online databases: the Cochrane Library, PubMed, PsycINFO and Web of Science. For many of the searches we relied on work that had been done for a recent review article by two of the authors:

Morgan AJ, Jorm AF (2009). Outcomes of self-help efforts in anxiety disorders. *Expert Reviews in Pharmacoeconomic Outcomes Research,* 9:445–459.

Evaluating the evidence

Studies were excluded if they involved people who had not been diagnosed with an anxiety disorder or sought help. Where there was an existing recent systematic review or meta-analysis, this was used as the basis for drawing conclusions. Where a systematic review did not exist, individual studies were read and evaluated. A study was considered adequate if it had an appropriate control group and participants were randomised.

For the complementary, lifestyle and psychological interventions, we included studies that tested the effects of adding treatments to commonly-used medical treatments e.g. a lifestyle intervention was evaluated in people already taking prescribed medication. This was not done for the medical interventions section so that the medical reviews were as clear and easy to understand as possible.

Writing the reviews

The reviews were written to be at the 8th grade reading level or less. Each review was written by one of the authors and checked for readability and clarity by a second author. All authors discussed and reached consensus on the 'thumbs up' rating for each treatment.

If a treatment gets the 'thumbs up' does that mean it will work for me?

When a treatment is shown to work in research studies, this does not mean it will work equally well for every person. While it might work for the average person, some people will have complications, side-effects, or the treatment may not fit well with their lifestyle.

If you have any concerns about a treatment that has received a 'thumbs down' rating, you should discuss the pros and cons of it with a GP or mental health professional to decide whether the treatment is suitable for you. It is not recommended that you stop using your current treatments until you have consulted a professional.

1 Australian Bureau of Statistics. (2008). *National Survey of Mental Health and Wellbeing: Summary of Results*,2007 (4326.0). Canberra: Australian Bureau of Statistics.

2 Sotsky SM, Glass DR, Shea MT, Pilkonis PA, Collins JF, Elkin I, et al. Patient predictors of response to psychotherapy and pharmacotherapy: findings in the NIMH Treatment of Depression Collaborative Research Program. *American Journal of Psychiatry*. 1991; 148:997–1008.

3 Krell HV, Leuchter AF, Morgan M, Cook IA, Abrams M. Subject expectations of treatment effectiveness and outcome of treatment with an experimental antidepressant. *Journal of Clinical Psychiatry*. 2004;65:1174–1179.

4 Priebe S, Gruyters T. The importance of the first three days: predictors of treatment outcome in depressed in-patients. *British Journal of Clinical Psychology*. 1995;34:229–236.

A summary of what works for anxiety

Psychological interventions	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social phobia	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Applied muscle tension	?	?	?	?	👍👍👍 For blood and injury phobia	?
Behaviour therapy (exposure therapies)	?	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍
Cognitive behaviour therapy (CBT)	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍
Computer-aided psychological therapy	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍
Eye movement desensitisation and reprocessing (EMDR)	?	👍👍👍	?	?	?	?
Narrative exposure therapy (NET)	?	👍👍👍	?	?	?	?
Psychodynamic psychotherapy	👍👍👍	?	👍👍👍	👍👍👍	?	?
Virtual reality exposure therapy	?	👍👍👍	?	👍👍👍	👍👍👍	?

Medical interventions	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social phobia	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Anti-convulsant drugs ⚠	👍👍👍	👎	?	👎	?	?
Antidepressant drugs ⚠	👍👍👍	👍👍👍	👍👍👍	👍👍👍	?	👍👍👍
Antihistamine drugs	👍👍👍	?	?	?	?	?
Antipsychotic drugs ⚠	👍👍👍	?	?	?	?	?
Azapirone drugs ⚠	👍👍👍	?	?	👎	?	?
Benzodiazepines ⚠	👍👍👍	?	👍👍👍	👍👍👍	👎	?
D-cycloserine ⚠	?	?	👍👍👍	👍👍👍	?	👍👍👍
Deep brain stimulation (DBS) ⚠	?	?	?	?	?	👍👍👍 (severe OCD that hasn't responded to other treatment)
Transcranial magnetic stimulation (TMS) ⚠	?	👍👍👍	?	?	?	👎

Complementary and lifestyle interventions	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social phobia	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Acupuncture	1 of 3	1 of 3	?	?	?	?
Bibliotherapy	?	?	1 of 3	2 of 3	?	?
Energy psychology (aka meridian tapping)	?	?	?	?	1 of 3	?
Kava ⚠	1 of 3	?	?	?	?	?
Relaxation training	2 of 3	1 of 3	1 of 3	2 of 3	1 of 3	?
Yoga	1 of 3	?	?	?	?	?

Psychological interventions

Acceptance and commitment therapy (ACT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

ACT is a type of cognitive behaviour therapy (CBT; see page 24). However, it is different to CBT because it does not teach a person how to change their thinking and behaviour. Rather, ACT teaches them to 'just notice' and accept their thoughts and feelings, especially unpleasant ones that they might normally avoid. This is because ACT therapists believe it is unhelpful to try to control or change distressing thoughts or feelings. In this way it is similar to mindfulness-based cognitive therapy (see page 34). ACT usually involves individual meetings with a therapist.

How is it meant to work?

ACT is thought to work by helping people accept difficult emotions and avoid 'over thinking' these experiences. Over thinking occurs when people focus on their 'self talk' rather than the experiences themselves. ACT encourages people to accept their reactions and to experience them without trying to change them. Once the person has done this, they are encouraged to respond to situations in ways that are consistent with their life goals. They are then encouraged to put those choices into action.

Does it work?

There has been one study that compared ACT with CBT in a mixed group of people with anxiety and depression problems and another study in a group of people with mixed anxiety problems. Both studies found that ACT was about as effective as CBT.

Social phobia

There has also been one study that tested ACT in people with social phobia. It found that many people improved, but did not compare ACT with no treatment or with another treatment.

OCD

One study has compared ACT to relaxation training for people with OCD. It found that many people improved, and that those who received ACT tended to have a better outcome.

PTSD and ASD

So far there is only one study reporting the successful treatment of a single person with PTSD.

Other types anxiety

There is no evidence on whether ACT works for GAD, panic disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether or not ACT works, but a few good studies have shown that it has similar effects to CBT, which is a very well-established treatment. ACT is a promising treatment for anxiety that needs more research before we can be confident that it works.

Applied muscle tension

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias (for blood and injury phobias)	👍👍👍
Social phobia	?	OCD	?

What is it?

People who have strong anxiety reactions to blood or injuries often show a unique response, where their blood pressure initially rises, then drops dramatically. When the blood pressure drops, these people sometimes faint. Applied muscle tension teaches people to raise their blood pressure by tensing their muscles when they are around blood or injuries to prevent this response.

How is it meant to work?

Teaching people to raise their blood pressure using muscle tension reduces the likelihood of fainting and helps people to gain confidence that they can cope with seeing blood or injuries. In this way they are progressively able to confront and overcome their fear.

Does it work?

Specific phobia

Applied muscle tension was specifically designed for blood and injury phobia. There has been a small number of studies that have found that applied muscle tension works as well as relaxation training (see page 105), and one that has found it is better than behaviour therapy alone (see page 21).

Other types anxiety

There is no evidence on whether applied muscle tension works in GAD, PTSD, social phobia, panic disorder or OCD.

Are there any risks?

None are known.

Recommendation

There is some evidence that applied muscle tension helps blood and injury phobias.

Art therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Art therapy is a form of treatment that encourages the person to express their feelings using art materials, such as paints, chalk or pencils. In art therapy, the person works with a therapist, who combines other techniques with drawing, painting or other types of art work, and often focuses on the emotional qualities of the different art materials.

How is it meant to work?

Art therapy is based on the belief that the process of making a work of art can be healing. Issues that come up during art therapy are used to help the person to cope better with stress, work through traumatic experiences, improve their decisions, and have better relationships with family and friends.

Does it work?

PTSD and ASD

One study examined the effect of a one-hour session of art therapy on children who had PTSD symptoms after physical injury. In the session, art was used to retell the incident. Children who did the art therapy intervention did not appear to reduce their PTSD symptoms more than other children who did not do art therapy.

Other types of anxiety

There is no evidence on whether art therapy works in GAD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

We do not yet know if art therapy works for anxiety.

Behaviour therapy (exposure therapy)

Evidence rating

GAD	?	Panic disorder and agoraphobia	👍👍👍
PTSD and ASD	👍👍👍	Specific phobias	👍👍👍
Social phobia	👍👍👍	OCD	👍👍👍

What is it?

Behaviour therapy for anxiety mainly relies on a treatment called exposure. There are a number of different approaches to exposure therapy. However, they are all based on exposing the person to the things that make them anxious. These approaches include:

In vivo exposure

This involves confronting the feared situation, usually in a gradual way. 'In vivo' means 'in real life'. The treatment usually lasts a number of hours. It can be completed in one long session or across multiple sessions. This treatment might also include being exposed to body sensations of anxiety (like giddiness or shortness of breath). Applied muscle tension (see page 19) is a treatment of this type used for phobias of blood, injection or injury.

Virtual reality exposure

Virtual reality exposure (see page 46) uses a computer program to create the feared situation. It is often used for fears that are difficult to confront in real life, such as fears of flying or heights.

Systematic desensitisation

This involves gradually exposing the person to fearful mental images and thoughts or to actual situations, while the person has relaxed using relaxation training (see page 105). The exposure starts with situations that produce mild fears and works up to the most fearful.

Flooding (also called implosion)

This involves intensive rather than gradual exposure to the situations the person fears. The exposure can be in real life or using mental images.

Behaviour therapy is often combined with cognitive approaches as part of cognitive behaviour therapy (CBT; see page 24). This section reviews evidence for using behaviour therapy alone, without the cognitive aspects of CBT.

How is it meant to work?

Anxiety problems often persist because the person avoids fearful situations. Avoiding these situations means that the person does not have the opportunity to learn that they can cope with the fear. The person needs to learn that their fear will reduce without the need to avoid or escape the situation, and that their fears about the situation often do not come true or are not as bad as they thought.

Does it work?

There are different types of exposure treatments that are specifically designed for different types of anxiety problems.

GAD

One study tested an approach called 'worry exposure', where a person purposely focuses on their worries. Worries are the main problem in GAD. In this study, the exposure therapy was compared to relaxation, and both approaches appeared to be equally helpful.

PTSD and ASD

PTSD is often treated using an approach called 'prolonged exposure', which uses exposure in real life or in imagination to help the person confront memories of their traumatic experiences. There is strong support for this approach across a number of well-designed studies.

Social phobia

Exposure treatment for social phobia is generally done in groups, where the person has the opportunity to expose themselves to difficult situations like meeting new people or public speaking. A number of studies have found that group exposure treatments for social phobia do work, although one study found that cognitive therapy is more effective.

Panic disorder and agoraphobia

Exposure to body sensations of anxiety was tested in one study and found to be more helpful than no treatment for panic disorder. 'In vivo' and 'virtual reality' exposure have also been found to be effective in a small number of studies. Panic disorder can also be treated by a type of exposure therapy called 'applied relaxation', which is similar to systematic desensitisation. One study compared applied relaxation to CBT and found that both produced strong improvements.

Specific phobias

There is strong evidence from a large number of studies that in vivo exposure and virtual reality exposure work for specific phobias. Indeed, exposure is one of the best treatments available for these problems.

OCD

OCD is treated with a type of exposure called 'exposure and response prevention'. This involves exposing the person to anxiety-producing thoughts or situations and then preventing them from using rituals or compulsions to reduce the anxiety. For example, a person might be asked to get dirt on their hands and then not wash them, even though they are worried about being infected. There is strong evidence from a number of good quality studies that this approach works.

Are there any risks?

Confronting fearful situations can be extremely distressing and behaviour therapy is generally best done with the support of a professional. If exposure is not done carefully it can make a person's anxiety worse.

Recommendation

There is strong evidence that behaviour therapies work for PTSD, OCD, specific phobias, social phobia, panic disorder and agoraphobia.

Biofeedback

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

In biofeedback, people are trained to recognise and control body functions that they are not normally aware of. These include blood pressure, heart rate, skin temperature, sweat gland activity, muscle tension, breathing and brain activity.

How is it meant to work?

Many body functions change during times of stress. In biofeedback, machines are used to feed back information about these changes to people. As biofeedback helps people to control these responses to stress, it may also help to reduce anxiety.

Does it work?

GAD

One study compared muscle biofeedback and two types of brain wave biofeedback with 'fake' meditation and with no treatment. Thirty-eight people with GAD received two one-hour sessions per week for four weeks. People in the muscle biofeedback group and one of the brain wave groups had lower anxiety symptoms. Improvements were maintained six weeks after treatment. Another study in people with GAD compared training to change their brain waves, with training to change the temperature of their earlobes. The brain wave training resulted in a greater reduction in anxiety.

PTSD and ASD

One study looked at brain wave biofeedback compared with no biofeedback in 29 Vietnam veterans receiving hospital treatment for PTSD. Participants received 30 lots of three minute biofeedback sessions. PTSD symptoms were lower in the biofeedback group and they also needed less medication. Patients in this group were also less likely to suffer a relapse.

OCD

Biofeedback for OCD has not yet been properly evaluated in well-designed studies. There are only reports of treatments with individual cases of OCD.

Panic disorder

One study compared a breathing biofeedback technique for panic disorder to a group with no treatment and found some evidence for greater improvements in the breathing biofeedback group.

Other types of anxiety

There is no evidence on whether biofeedback works for social phobia or specific phobias.

Are there any risks?

None are known.

Recommendation

We do not yet know if biofeedback works for anxiety.

Cognitive behaviour therapy (CBT)

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

What is it?

In CBT, clients work with a therapist to look at patterns of thinking (cognition) and acting (behaviour) that are making them more likely to have problems with anxiety, or are keeping them from improving once they become anxious. Once these patterns are recognised, then the person can make changes to replace these patterns with ones that reduce anxiety and improve coping. It can be conducted in individual meetings with a therapist, or in groups. Treatment length can vary but is usually conducted over four to 24 weekly sessions. CBT is often combined with behaviour therapy (see page 21).

How is it meant to work?

CBT is thought to work by helping people to recognise patterns in their thinking and behaviour that make them more vulnerable to anxiety. For example, thinking that is focused on threats and dangers is often linked with anxiety. In CBT, the person works to change these patterns to use more realistic and problem-solving thinking. As well, anxiety is often increased when a person actively avoids things they are afraid of. Learning to face up to situations that are anxiety provoking is also often helpful.

Does it work?

CBT has been assessed in a large number of high quality studies. It has been applied to all types of anxiety covered in this booklet and has been found to be effective in both the short term (immediately after treatment) and the long term (many years after treatment). A statistical pooling of data from all these studies showed that CBT is one of the best treatments available for anxiety.

Are there any risks?

None are known.

Recommendation

CBT is a highly recommended treatment for all types of anxiety.

Computer-aided psychological therapy

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

What is it?

Computer-aided psychological therapy (CAP) consists of structured sessions of cognitive behaviour therapy (CBT; see page 24) or behaviour therapy (see page 21) delivered through a computer, usually over the internet. An individual works through the program on their own. CAP can be used with or without support from a professional, though most programs involve some form of support. Therapists may offer support via telephone, email, text, or instant messaging, to help the person successfully apply what they are learning to their life. A number of different programs can be accessed via www.mindspot.org.au.

How is it meant to work?

CBT and behaviour therapy are helpful for anxiety when delivered by a professional. The structured nature of these treatments means they are well suited to computerised delivery. The computer or web programs teach people to identify and change patterns of thinking and behaviour that might be keeping them from overcoming their anxiety. Because learning new information and skills is a key part of CBT, computerised delivery can make this treatment more easily available to a wider range of people than would be possible if everyone had to see a therapist face to face.

Does it work?

GAD

Three good quality studies have evaluated CAP for GAD. These studies took place over the internet, and included six to eight modules, weekly homework assignments and supportive contact from a therapist. All three studies showed that CAP was more effective than no treatment.

PTSD and ASD

Five good quality studies have been carried out of CAP for PTSD (e.g. Interapy). All were in adults and took place over the internet. Therapists provided support and feedback on homework in most of these studies. All studies showed that CAP was effective.

Social phobia

A number of good quality studies have been carried out of CAP for social phobia (e.g. the Shyness Programme). Pooling the results from eight of these studies showed that CAP was more effective than no treatment. All of these studies took place over the internet and most had support from a therapist.

Panic disorder and agoraphobia

There are more than 10 good quality studies of CAP for panic disorder (e.g. Panic Stop!). Most of these studies took place over the internet with two to ten modules and practice exercises. Most had some form of therapist contact such as weekly feedback on the practice exercises. Pooling the results from these studies showed that CAP was more effective than comparison conditions (e.g. no treatment or information about panic). It was also as effective as face-to-face therapy. More recently published studies also confirm these findings.

Specific phobias

A number of studies have been carried out of CAP for specific phobias (e.g. spider phobia or flight phobia). These studies involved three to six sessions of exposure to the feared object or situation on a computer. Most of these studies showed

that CAP was more effective than no treatment or control treatments such as relaxation. The CAP treatment was also as effective as face-to-face therapy (such as in vivo exposure).

OCD

Two good quality studies have been carried out of CAP for OCD in adults and adolescents. The first compared the program BT Steps (now known as OCFighter) with face-to-face therapy and relaxation training. BT Steps is a computer-driven telephone system that teaches exposure and ritual prevention. Participants had 17 weeks of access to the system and received nine telephone calls from therapists. This study found that CAP was more effective than relaxation training but not as effective as face-to-face therapy. The second study compared an internet-based CAP with supportive counselling delivered over the internet. The CAP included 10 modules with homework assignments and support from a therapist. Both treatments were helpful but the CAP was more effective.

Are there any risks?

CAP is relatively safe.

Recommendation

Computer-aided psychological therapy is an effective treatment for anxiety. Better results are achieved with greater therapist contact.

Dance and movement therapy (DMT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

DMT combines expressive dancing with discussion of a person's life difficulties. A DMT session usually involves a warm-up and a period of expressive dancing or movement. This is followed by discussion of the person's feeling and thoughts about the experience and how it relates to their life situation.

How is it meant to work?

DMT is based on the idea that the body and mind interact. It is thought that a change in the way someone moves will have an effect on their patterns of feeling and thinking. It is also assumed that dancing and movement may help to improve the relationship between the person and the therapist, and may help the person to express feelings of which they are not aware. Learning to move in new ways may help people to discover new ways of expressing themselves and to solve problems.

Does it work?

DMT has not yet been properly evaluated in well-designed studies. There are only reports of treatments with individual cases.

Are there any risks?

None are known.

Recommendation

We do not yet know if DMT works for anxiety.

Eye movement desensitisation and reprocessing (EMDR)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	👍👍👍	Specific phobias	?
Social phobia	?	OCD	?

What is it?

EMDR was developed to treat symptoms resulting from disturbing or traumatic experiences. It involves recalling these life experiences for short periods (15-30 seconds) while also moving the eyes back and forth. Sometimes another task, such as hand tapping or listening to tones, is used instead of eye movements.

How is it meant to work?

There are two theories about how EMDR works. One says that eye movements specifically help the person to deal with traumatic memories at a biological and psychological level. The other says that the eye movements do not have a special role in dealing with the trauma. Rather they simply help the person to expose themselves to disturbing memories (see behaviour therapy; page 21), which is really responsible for the improvements.

Does it work?

PTSD and ASD

There have been a large number of good quality studies of EMDR for PTSD. A pooling together of data from these studies showed that it is one of the most effective treatments for these problems. It is much better than no treatment and as effective as cognitive behaviour therapy (see page 24) and behaviour therapy (see page 21).

Other types of anxiety

There is no evidence on whether EMDR works for social phobia or panic disorder, but there are a few reports of individual cases showing promising evidence for its use with GAD, specific phobia and OCD. However, there are no high quality studies that compare a group of people with these difficulties who have received EMDR with a group receiving another treatment or no treatment.

Are there any risks?

Confronting traumatic memories can be extremely distressing for some people and may be best done with the support of a professional.

Recommendation

EMDR is a recommended treatment for PTSD. There is not enough evidence to say whether it works for other types of anxiety.

Family therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Family therapy involves a number of different treatment approaches that all treat family relationships as important for mental health. Usually, the whole family (or at least some family members) will attend sessions, rather than just the person with anxiety. The therapist helps the family change patterns of communication, so that their relationships can be more supportive and with less conflict. Family therapy approaches are most often used when a child or adolescent has the anxiety.

How is it meant to work?

Family therapists take the view that, even if the problem mainly involves one family member, involving the whole family in the solution will be the most helpful approach. This is especially true when a child or adolescent is affected. This is because relationships play a large role in how we feel about ourselves and our ability to cope with fears. When family relationships are supportive and honest, this will often help to resolve problems and improve the ability of family members to cope with anxiety.

Does it work?

There have been no studies testing whether family therapy that focuses on family relationships reduces anxiety. However, there have been a large number of studies showing the benefits of involving the family to help with cognitive behaviour therapy (CBT; see page 24) for anxiety in children.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether or not family therapy works. However, involving the family to help with CBT is effective for children with anxiety.

Flooding (aka 'implosion therapy')

Flooding involves intensive rather than gradual exposure to situations that a person fears. The exposure can be in real life or using mental images. This is a type of behaviour therapy and is covered on page 21.

Hypnosis

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Hypnosis involves a therapist helping a person to get into a hypnotic state. This is an altered state of mind in which the person can experience very vivid mental imagery. Time may pass more slowly or more quickly than usual and the person often notices things that are passing through their mind that they might not otherwise notice. The person might also find that they are able to ignore or forget about certain painful or unpleasant emotional experiences, including physical pain.

How is it meant to work?

Hypnosis is usually used along with another type of therapy, such as psychodynamic psychotherapy (see page 39) or cognitive behaviour therapy (CBT; see page 24). This means that there are many different types of hypnosis approaches. However, all of the approaches use hypnosis to help the person to make important changes, such as resolving emotional conflicts, focusing on strengths, becoming more active, tolerating anxious feelings or changing ways of thinking. It is believed that these changes are easier to make when the person is in a hypnotic state.

Does it work?

Most of the studies that have looked at hypnosis for anxiety report case studies (descriptions of treatment with an individual person).

PTSD and ASD

There is one good quality study suggesting that adding hypnosis to CBT for ASD might make CBT more effective.

Other types of anxiety

There is no evidence on whether hypnosis works for GAD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether hypnosis works. While there is some evidence that hypnosis may enhance the benefits of CBT for ASD, this needs to be confirmed in other studies.

Interpersonal therapy (IPT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

IPT was originally designed to treat depression. It focuses on problems in personal relationships, and on building skills to deal with these problems. IPT is based on the idea that these interpersonal problems are a significant part of the cause of emotional problems. It focuses on personal relationships rather than what is going on in the individual's mind (e.g. thoughts and feelings). Treatment length can vary, with IPT usually conducted over four to 24 weekly sessions.

How is it meant to work?

IPT is thought to work by helping people to recognise patterns in their relationships with others that make them more vulnerable to emotional problems like depression and anxiety. In this treatment, the person and therapist focus on specific interpersonal problems, such as grief over lost relationships, different expectations in relationships between the person and others, giving up old roles to take on new ones, and improving skills for dealing with other people. By helping the individual to overcome these problems, IPT aims to help them control their anxiety.

Does it work?

PTSD and ASD

One study has been done in women with PTSD and found that IPT was more effective than no treatment. There have also been two other studies showing that IPT can be helpful for PTSD, but neither of these compared IPT to another treatment.

Social phobia

IPT has been compared to cognitive behaviour therapy (CBT; see page 24) and supportive therapy (see page 44) for social phobia and found to work about as well as these two therapies, although another study did find that CBT was more effective than IPT for social phobia. However, IPT has not been compared to no treatment.

Panic disorder and agoraphobia

There have been two studies of IPT for panic disorder. One study showed that most of the people improved. However, there was no comparison group, so it is hard to say whether they might have improved anyway without the IPT. In the other study, IPT was compared with CBT and CBT was found to be the better treatment.

Other types of anxiety

There is no evidence on whether IPT works for GAD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

While there is some evidence that IPT works for PTSD and social phobia, more studies are needed. Some recent studies have suggested that CBT might be a better approach to anxiety than IPT. There is not enough evidence to say whether or not IPT works for other types of anxiety.

In vivo exposure

In vivo exposure involves confronting a feared situation, usually in a gradual way. This is a type of behaviour therapy and is covered on page 21.

Mindfulness-based therapies

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Mindfulness-based therapies include a number of approaches, including mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT). These approaches involve learning a type of meditation called 'mindfulness meditation'. This type of meditation teaches people to focus on the present moment. People just notice whatever they are experiencing, including pleasant and unpleasant experiences, without trying to change them. At first, this approach is used to focus on physical sensations such as breathing. Mindfulness therapies often also include gentle yoga (see page 113). These therapies are generally delivered in groups.

How is it meant to work?

Mindfulness-based therapies help people to change their state of mind so that they can experience what is happening right now. People with anxiety often worry about future events. Focusing on the present stops their minds wandering off into thoughts about the future or the past. This is thought to be helpful in preventing anxiety. It may also help to prevent people from behaving in unhelpful ways as they try to avoid unpleasant thoughts and feelings. Yoga may also have some physical health benefits.

Does it work?

Several good quality studies have tested MBSR in people with anxiety. Some of these have compared MBSR with no treatment and some have compared it with other treatments. One study compared MBSR with no treatment in 76 people diagnosed with GAD, panic disorder or social phobia. People in the MBSR group had lower anxiety symptoms after the course. Their symptoms were still lower six months later. Another study tested MBSR in people with anxiety. These people were compared with another group who did not do the course. Anxiety symptoms were lower in the MBSR group. Most of the benefits appeared to be due to reductions in dwelling on negative thoughts.

A good quality study compared MBSR with an education program in 41 people with GAD or social phobia. All the people in this study were also taking antidepressants (see page 50) or benzodiazepines (see page 57). MBSR was better at reducing anxiety symptoms than the education program. Another study tested the addition of MBSR to usual treatment in 102 young people aged between 14 and 18. About one-third of these young people had been diagnosed with anxiety. Anxiety symptoms were lower in the MBSR group. Also, after five months, those in the MBSR group were less likely to meet the criteria for anxiety.

GAD

Two small studies have tested MBCT in people with GAD. In one, 11 people participated in an eight-week MBCT course. They met once a week for two hours and also practised mindfulness meditation at home. All participants were less anxious at the end of the course. In the other study, 23 people took part in a nine-week course. Most participants had less uncontrollable worry and stress after the course. After three months, these improvements were maintained. However, there were no comparison groups in these studies, so we don't know whether MBCT was more helpful than no treatment.

Social phobia

MBSR and MBCT have been compared to group cognitive behaviour therapy (CBT; see page 24) for the treatment of social phobia. In one study, 53 people took part in either an eight-week MBSR course or 12 weeks of group CBT. People in both groups improved but people in the CBT group had lower symptoms. People in the CBT group were also less likely to experience the return of social phobia symptoms. In the other study, an eight-week MBCT course was compared with 12 weeks of group CBT in 26 young adults. Participants in both groups showed improved anxiety symptoms, with MBCT working almost as well as CBT.

Another study compared MBSR with exercise in 56 people. People in the exercise group did at least three exercise sessions a week. Both MBSR and exercise led to improvements in symptoms after the courses and also after three months. There were no differences between the two groups.

Panic disorder and agoraphobia

One study tested MBCT in 23 people with panic disorder. All participants were also taking antidepressants or benzodiazepines. After MBCT, participants' anxiety levels were reduced. However, there was no comparison group that did not receive any treatment.

Other types of anxiety

There is no evidence on whether mindfulness-based therapies work for PTSD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

Mindfulness-based therapies appear promising for GAD and social phobia but more research is needed. There is not enough evidence to say whether mindfulness-based therapies are effective for other types of anxiety.

Narrative exposure therapy (NET)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	👍👍👍	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Narrative exposure therapy (NET) is an approach to psychological therapy that focuses on how people think about themselves and their life situations in terms of narratives, or stories. People come for this therapy either alone, with their partner, or with their families.

How is it meant to work?

NET proposes that human problems are partly caused by the language we use to describe them. In particular, people tell themselves stories about their difficulties and the life situations in which they occur. Some of these stories can increase anxiety, especially stories where the person sees himself or herself as powerless or unacceptable. NET helps people change these stories so that they are less likely to cause anxiety.

Does it work?

PTSD and ASD

Four good quality studies have been used to test NET in adults with PTSD. One study compared NET, trauma counselling and no treatment in 277 African refugees. NET and trauma counselling were both better than no treatment at reducing PTSD symptoms. Another study compared NET, supportive therapy (see page 44) and an education session in 43 African refugees. One year after treatment, only one-third of the people in the NET group still had PTSD while most of the people in the other groups did. NET was compared with usual treatment in 32 asylum seekers and was found to be better at reducing PTSD symptoms. Another study showed that NET was better than an education session at reducing PTSD symptoms in 18 former political prisoners.

NET has also been studied in children. It was compared with interpersonal therapy (IPT; see page 32) in African orphans. After treatment, improvement was similar in both groups. After one year, those in the NET group had lower symptoms than those in the IPT group. Another study compared NET with no treatment in 26 refugee children. Symptom improvement of children in the NET group was greater.

Other types of anxiety

There is no evidence on whether NET works for GAD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

NET appears to work for PTSD. We do not yet know if it is an effective treatment for other types of anxiety.

Neurolinguistic programming (NLP)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

NLP was developed in the 1970s. It was based on observing people who were thought to be expert therapists. NLP tries to teach people to use language in a similar way to these people. In this way they may also be effective therapists.

How is it meant to work?

NLP emphasises changing the language we use. This may then change the way we see ourselves and the things that happen to us. In NLP, a therapist uses specific patterns of communication with a client. This may include matching their preferred sensory mode – vision, hearing or touch. The aim is to change negative and self-defeating perceptions into positive ones. This helps to change the way a person interprets their world. In this way, NLP aims to reduce anxiety.

Does it work?

Specific phobias

In one study, NLP was used to treat people with claustrophobia who had to undergo a brain scan in an enclosed scanner. In this study, 50 people who had refused an MRI because of claustrophobia had an NLP session. After the session, 38 people were then able to undergo the MRI. These people were also less anxious. However, since there was no comparison group it is not possible to say how effective the NLP was.

Other types of anxiety

There is no evidence on whether NLP works for GAD, PTSD, social phobia, panic disorder or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether NLP is effective for anxiety.

Psychoanalysis

Psychoanalysis focuses on the unconscious patterns in the mind and the roles these play in psychological problems. Unconscious patterns include thoughts and feelings of which a person is not aware. There are many different types of psychoanalysis. In traditional psychoanalysis, a client may see a therapist three to five times per week and the therapy may last for a number of years. Often clients lie on a couch during psychoanalytic sessions. Psychoanalysis is a particular type of psychodynamic psychotherapy and is covered on the following page.

Psychodynamic psychotherapy

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

What is it?

Psychodynamic psychotherapy focuses on the unconscious patterns in the mind and the roles these play in psychological problems. Unconscious patterns include thoughts and feelings of which a person is not aware. Short-term psychodynamic psychotherapy usually takes about 20-30 weeks. Long-term psychodynamic psychotherapy can take more than a year and, in some cases, it takes many years. Psychoanalysis is a type of long-term psychodynamic psychotherapy. In psychoanalysis, the client may lie on a couch and talk about whatever is going through their mind. However, most often in psychodynamic psychotherapy the client and therapist sit and talk to each other face to face, in a similar way to other types of psychological therapy.

How is it meant to work?

In psychodynamic therapy, therapists work with the person's thoughts, images and feelings. The therapist's relationship with the person is also used to understand emotional problems that the person is not aware of. These are often issues related to experiences early in life such as during childhood. By making the person more aware of these unconscious conflicts, they can deal with them. This can help to resolve issues that can cause anxiety.

Does it work?

Two good quality studies have tested psychodynamic psychotherapy in people with anxiety. The first study compared long-term psychodynamic psychotherapy, short-term psychodynamic psychotherapy and solution-focused therapy in 326 people. Almost half the people had been diagnosed with anxiety. After one year, more people in the short-term group recovered from anxiety. After three years, more people in the long-term group recovered. The other study compared 40 weeks of psychodynamic psychotherapy with usual treatment in 60 people. About two-thirds of the people had been diagnosed with GAD, panic disorder or social phobia. The results showed that both treatments improved symptoms and psychodynamic psychotherapy was more effective.

GAD

Several studies have tested the effectiveness of short-term psychodynamic psychotherapy in treating GAD. Most of these suggest that it is helpful. However, the studies have mostly not been good quality. Some used groups of people with a range of anxiety disorders. Others have not used large enough numbers of people or comparison (control) groups.

Psychodynamic psychotherapy has also been compared with cognitive behaviour therapy (CBT; see page 24) in two better quality studies. In one study, the results showed that while both types of therapy improved symptoms, CBT was more effective. In this study, having eight to 10 sessions of therapy was as effective as 16 to 20 sessions. A second good quality study also compared short-term psychodynamic therapy and CBT. Both types of therapy helped anxiety symptoms, although CBT was better at reducing worry and depression. Another study compared psychodynamic psychotherapy alone, medication alone and combined treatment. All treatments were equally effective.

PTSD and ASD

One study compared psychodynamic psychotherapy, systematic desensitisation, hypnotherapy and no treatment for PTSD. Results showed that all three treatments were more effective than no treatment. Another study looked at the effect of

psychodynamic psychotherapy in Vietnam War veterans. Twenty-three people completed the treatment, which averaged 56 sessions. All participants improved in some aspects of PTSD. Another study examined the effect of 12 sessions of psychodynamic psychotherapy in victims of violent crime. Eight people completed the treatment and all but one had good results. However, these two studies had no comparison groups.

Social phobia

Two good quality studies have looked at the effects of short-term psychodynamic psychotherapy on social phobia. In one study, 42 people received medication and education about the disorder. In addition, the participants received psychodynamic psychotherapy, relaxation training or exposure therapy (see page 21). Psychodynamic psychotherapy was more effective than relaxation but less effective than imaginal exposure. The second study compared medication and short-term psychodynamic psychotherapy with medication alone. The symptoms of people in the psychodynamic psychotherapy plus medication group improved more.

Panic disorder and agoraphobia

Several case studies and lower quality studies have shown benefits of psychodynamic psychotherapy in people with panic disorder. In one better quality study, researchers compared psychodynamic psychotherapy and relaxation training in 49 people. Both treatments were given twice a week for 12 weeks. People in the psychodynamic psychotherapy group had fewer panic attacks than those in the relaxation group. They also felt that their lives were less affected by the disorder than those in the relaxation group. Another study compared treatment with medication and 15 sessions of psychodynamic psychotherapy to treatment with medication alone. After nine months, people in both groups were free of panic attacks and stopped taking the medication. Those in the psychodynamic psychotherapy group were less likely to start having panic attacks again.

Other types of anxiety

There is no evidence on whether psychodynamic psychotherapy works for specific phobias or OCD. There has been one study pooling the results of studies of long-term psychodynamic psychotherapy. This showed that it may be more helpful than short-term treatment for people with complex mental health problems.

Are there any risks?

No major risks are known. However, the long-term therapy can be expensive and time consuming. It might be important to consider whether a short-term treatment might be just as effective, if not more so.

Recommendation

Both short- and long-term types of psychodynamic psychotherapy appear to work for GAD and social phobia. Short-term psychodynamic psychotherapy may work for panic disorder. However, some larger studies should be done so we can be more confident of this. We do not yet know whether psychodynamic psychotherapy works for other types of anxiety.

Rational emotive therapy (RET)

In RET, a person works with a therapist to look at unreasonable beliefs that may stop them achieving their goals and lead to anxiety. They then work to replace these with more reasonable beliefs. This is done by challenging beliefs though philosophical discussions with the therapist and experimenting with new types of behaviour. This is a type of cognitive behaviour therapy and is covered on page 24.

Relationship therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Relationship therapy aims to help an anxious person by improving their relationship with their partner. Both partners come for a series of counselling sessions over a period of eight to 24 weeks. A person does not have to be married to use this approach, but needs to be in a long-term relationship.

How is it meant to work?

Relationship therapy has three main aims. The first is to reduce negative interactions between partners, such as arguments, criticisms and abuse. The second aim is to increase supportive interactions, such as praise, empathy, forgiveness and problem solving. The third is to make sure that the partner is not doing anything to keep the anxious person from overcoming their problems. By changing the couple's behaviour in a positive way, it is believed that their satisfaction with their relationship will improve, and this will help the partner who is anxious.

Does it work?

There have been no studies testing whether relationship therapy that focuses on marital relationships works for anxiety. However, there have been a large number of studies on involving partners to assist with cognitive behaviour therapy (CBT; see page 24) or behaviour therapy (see page 21). This involves the partner assisting directly with the treatment program and appears to be an effective approach.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether or not relationship therapy works for anxiety.

Social skills training

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Social skills training is mainly used for social phobia. It involves learning how to interact in social situations with the help of a therapist. Sometimes, social skills training is used on its own. However, it is more often used as part of a broader cognitive behaviour therapy (CBT; see page 24) package.

How is it meant to work?

Some people with social phobia may not know how to act in various social situations. Social skills training teaches them these skills. Other people may have the social skills, but be afraid to use them. For these people, social skills training gives them a chance to practise using their skills in a non-threatening situation.

Does it work?

Social phobia

No studies have compared social skills training with no treatment. However, a number of studies have compared it to other psychological therapies. Three studies found that social skills training worked as well as CBT, but a fourth study found it did not work as well. There have also been a number of studies that looked at whether there was benefit in adding social skills training to CBT. Two studies found that it did not add anything, but a third study found that it did.

Other types of anxiety

There is no evidence on whether social skills training works for GAD, PTSD, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether social skills training works for social phobia.

Supportive therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Supportive therapy is a type of psychological therapy that aims to help a person to function better by providing personal support. In general, the therapist does not ask the person to change; rather they act as a support, allowing the person to reflect on their life situation in an environment where they are accepted.

How is it meant to work?

Supportive therapists believe that for some people with long-term problems the most helpful approach is to provide them with a reliable, accepting counselling relationship. This helps them cope with the challenges of day-to-day life and is especially useful for dealing with long-term problems that are difficult to change. The relationship of support and acceptance with the person's therapist is critical to helping them to cope better, even if they cannot change many of the problems they are facing.

Does it work?

GAD

Several studies have compared supportive therapy to cognitive behaviour therapy (CBT; see page 24) and found that it did not work as well. There are no studies comparing supportive therapy to no treatment.

PTSD and ASD

Many studies have compared supportive therapy to CBT. These studies found that it did not work as well for either ASD or PTSD. One study compared supportive therapy with no treatment for PTSD. This study found that supportive therapy worked better than no treatment.

Social phobia

Several studies have compared supportive therapy to CBT and found that it did not work as well. One study compared it to interpersonal therapy (see page 32) and found no difference in effects. There are no studies comparing supportive therapy to no treatment.

Panic disorder and agoraphobia

Two studies have found that supportive therapy did not work as well as CBT. There are no studies comparing supportive therapy to no treatment.

Specific phobias

One study has been done on school phobia in children. This found that supportive therapy was as effective as CBT. There are no studies comparing supportive therapy to no treatment.

OCD

There is no evidence on whether supportive therapy works for OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether supportive therapy works for anxiety. However, it does not work as well as CBT for most types of anxiety.

Systematic desensitisation

Systematic desensitisation involves gradually exposing a person to fearful mental images and thoughts or to actual situations, while the person has relaxed using relaxation training. This is a type of behaviour therapy and is covered on page 21.

Virtual reality exposure therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	👍
PTSD and ASD	👍	Specific phobias	👍
Social phobia	?	OCD	?

What is it?

Exposure therapy (see page 21) aims to reduce anxiety by having the person confront what they fear. Exposure can be carried out in different ways, such as in real life or using imagery. Another way is using virtual reality, where the person is exposed to a computer-generated environment. This simulated environment changes in a natural way depending on the person's head or body movements. Getting the exposure through virtual reality has a number of advantages. The person can be exposed safely (e.g. to spiders or heights) in a convenient and private location (e.g. an office). For some feared situations (e.g. flying), it is cheaper to use virtual reality than real life exposure. Virtual reality exposure therapy is mainly used in the treatment of phobias. However, it has been used with some other types of anxiety too. This treatment is provided by practitioners with specialist equipment.

How is it meant to work?

Through exposure to a feared situation, the person gets used to that situation. Their fear reduces and their sense of control improves as they feel less need to avoid the situation.

Does it work?

GAD

One study compared virtual reality exposure therapy to being on a waiting list for treatment. It did not find that virtual reality exposure therapy was better. This was a small study and more research is needed.

PTSD and ASD

Virtual reality exposure therapy has been used in the treatment of PTSD, particularly in war veterans. Two studies have compared it with control treatments and have found it to be more effective.

Social phobia

One study found that virtual reality exposure therapy worked as well as real life exposure. There have been no studies comparing it to no treatment.

Panic disorder and agoraphobia

One study of virtual reality exposure therapy for panic disorder found that it worked better than no treatment and also better than real life exposure. Another study has shown that it is about as effective as standard treatments such as cognitive behaviour therapy (CBT, see page 24).

Specific phobias

Virtual reality exposure therapy has been used to treat various types of specific phobias, particularly fear of heights, flying and spiders. Studies have been carried out comparing it to no treatment, to other forms of exposure therapy and to relaxation training. A pooling of data from these studies found that it works better than no treatment and at least as well as real life exposure.

Other types of anxiety

There is no evidence on whether virtual reality exposure therapy works for OCD.

Are there any risks?

None are known.

Recommendation

Virtual reality exposure therapy works for many types of specific phobias, especially fear of heights, flying and spiders. Recent studies suggest that it may also be helpful for PTSD and panic disorder, although more research is needed. There is not enough evidence to say whether it works for other types of anxiety.

Medical interventions

Anti-convulsant drugs

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

Side-effects of these drugs include the risk of developing a serious rash, dizziness, feeling sedated (sleepy), nausea and weight gain.

What are they?

Anti-convulsant drugs are mainly used in the treatment of epilepsy. However they are also used as a mood stabiliser, which means that they help to reduce intense changes in mood. Anti-convulsants have mainly been used in bipolar disorder, and tried in major depression that has not responded to other medications or psychological therapies. They have also been used for anxiety, since depression frequently co-occurs with these conditions. These drugs can be used together with another medication (e.g. an antidepressant or a benzodiazepine) or on their own. These drugs can only be prescribed by a doctor.

How are they meant to work?

Anti-convulsant drugs work by reducing excessive activity of neurons (nerve cells) in the fear circuits in the brain. It is not known exactly how they work, but the effect is to calm 'hyperactivity' in the brain.

Do they work?

GAD

There have been at least nine good quality studies that have compared anti-convulsant drugs to placebo (dummy) pills as a short-term treatment for GAD (i.e. four to eight weeks). Research shows that the anti-convulsant drug pregabalin is more effective than placebo in reducing anxiety symptoms. However, other anti-convulsants (such as tiagabine) have not been found to be effective compared to placebo. There are no studies of whether these drugs are helpful over longer periods of time.

PTSD and ASD

There have been five good quality studies that have compared an anti-convulsant drug to placebo pills. In the largest study, treatments were given to 232 patients for 12 weeks. There was no difference in PTSD symptoms between the groups at the end of the study. The same negative result was found in three smaller studies. A final study involving 14 patients showed that PTSD symptoms improved more among those who received an anti-convulsant drug compared to placebo.

Social phobia

There have been at least five good quality studies that have compared an anti-convulsant to placebo pills. Three studies found that anti-convulsants pregabalin and gabapentin were more effective than placebo in reducing phobic symptoms. In the other two studies, the anti-convulsant levetiracetam was no more effective than placebo.

Panic disorder and agoraphobia

There have been two good quality studies that have compared an anti-convulsant drug to placebo. In the larger study, treatment was given to 103 patients for eight weeks. The results showed no difference in panic symptoms between groups at the end of treatment. The same result was found in a smaller study of 14 patients who received treatment for eight weeks.

Specific phobias

There is no evidence on whether anti-convulsants work for specific phobias.

OCD

There have been no good quality studies comparing an anti-convulsant drug to placebo in people with OCD. There is limited evidence from case studies that people who have been prescribed an anti-convulsant drug for OCD may experience some benefit.

Are there any risks?

Common side-effects of anti-convulsants include the risk of developing a serious rash, as well as feeling dizzy, heavily sedated (sleepy), nausea, tremor (shakes) and weight gain. Different types of anti-convulsants have different side-effects. Most side-effects lessen over time.

Recommendation

There are mixed results for the use of anti-convulsants for anxiety disorders. Overall, the evidence is not as strong as for other treatments. There is evidence that these drugs are effective for GAD, but only in the short term and only for one type of anti-convulsant (pregabalin). There are mixed findings as to whether these drugs work for social phobia – more research is needed in this area. These drugs do not appear to be effective for PTSD and Panic Disorder. There is no high quality research for the use of these drugs to treat OCD.

Antidepressant drugs

Evidence rating

GAD	👍👍👍	Panic disorder and agoraphobia	👍👍👍
PTSD and ASD	👍👍👍	Specific phobias	?
Social phobia	👍👍👍	OCD	👍👍👍

Common side-effects of these drugs include headache, nausea, drowsiness and sexual problems. Some types of antidepressants have worse side-effects than others.

What are they?

Antidepressants are drugs that are mostly used to treat depression. These drugs tend to be used to treat anxiety for two main reasons. These drugs can only be prescribed by a doctor.

There are many different types of antidepressants. The type that is used the most is called selective serotonin re-uptake inhibitors (SSRIs). Some examples of SSRIs are sertraline (brand name Zoloft), escitalopram (Lexapro), citalopram (Cipramil), paroxetine (Aropax), fluoxetine (Prozac) and fluvoxamine (Luvox). There are also serotonin and noradrenaline reuptake inhibitors (SNRIs), the most common drug being venlafaxine (Efexor). Older style drugs that are still used are called tricyclic antidepressants, and include imipramine (Tofranil) and clomipramine (Anafranil).

How are they meant to work?

Different types of antidepressants work in slightly different ways, but they all act on chemicals in the brain related to emotions and motivation.

Do they work?

GAD

Several reviews of high quality studies show that antidepressants are more effective than placebo (dummy pills) in improving anxiety symptoms in adults with GAD. These benefits persist in the medium term (i.e. up to seven months). It is not clear whether one type of antidepressant is better than others, although one review suggests that fluoxetine was superior to other medications. One small study also found an SSRI was better than a placebo in children and adolescents. The SNRI venlafaxine has also been shown to be more effective than placebo in children and adolescents.

PTSD and ASD

There have been a number of good quality studies that have compared an SSRI to a placebo in adults with PTSD. A review that pooled the data from these studies found that SSRIs are more effective than placebo in the short term for reducing symptoms in adults with PTSD. The results suggested that some types of SSRIs (for example paroxetine and sertraline) might be more effective than others. Two studies have also found that the SNRI drug venlafaxine is more effective than placebo for adults with PTSD. The handful of studies on SSRIs and SNRIs for children or adolescents with PTSD or ASD have shown mixed results.

Social phobia

There have been several reviews that have pooled the results of high quality studies comparing antidepressants to placebo in adults with social phobia. These studies involve well over 5000 adults. Overall these studies show that antidepressants are more effective than placebo in the short term. A smaller number of studies also show longer-term benefits where the drugs have prevented relapse. Three studies in children and adolescents have shown that antidepressants are better than placebo in the short term.

Panic disorder and agoraphobia

A review of 11 good quality studies show that SSRIs are more effective than placebo in the short term for reducing the number of acute panic attacks or general symptoms of anxiety in adults. There are a smaller number of studies suggesting that the benefits of antidepressants may persist in the longer term (i.e. up to two years). There are no good quality studies of antidepressants for panic disorder in children or adolescents.

Specific phobias

There is no research testing whether antidepressants work for specific phobias.

OCD

A review of a number of studies, involving more than 3,000 adults, found that SSRI drugs were more effective than placebo in treating OCD in the short to medium term (i.e. between six weeks and three months). Antidepressants have also been compared with placebo in 10 studies of children and adolescents with OCD. Pooling results from these studies shows that antidepressants are moderately effective.

Are there any risks?

Side-effects of antidepressants have been noted in people who are taking these drugs for depression. As anxiety and depression often occur together it is important to be aware of possible side-effects. Some antidepressants have worse side-effects than others. SSRIs appear to have fewer side-effects than other types of antidepressants. Some common side-effects of SSRIs are mild headache, nausea, drowsiness and sexual problems. Some of these last for only a short time. Adolescents and young people have higher rates of suicidal thinking compared to placebo groups when prescribed antidepressants for depression, so extra caution is required for this age group.

There may be risks to an unborn child if SSRIs are taken in early pregnancy.

For everyone who begins taking an antidepressant, a doctor should frequently check if they are improving and whether there are side-effects.

Recommendation

Evidence indicates that antidepressants are effective for treating most types of anxiety.

Anti-glucocorticoid (AGC) drugs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Side-effects of these drugs include developing a rash, fatigue, constipation, changes in appetite and sleep problems.

What are they?

AGCs are drugs that reduce the body's production of cortisol which is a stress hormone. AGCs are prescribed by a doctor.

How are they meant to work?

High levels of anxiety, especially over long periods of time, can lead to over-activity of the body's stress system. This can cause the body to produce too much cortisol. It is believed that drugs that target the stress system might also help treat anxiety.

Do they work?

PTSD and ASD

The use of AGCs was studied in five women who had severe, long-lasting PTSD. None of the women had benefited from years of treatment with psychological therapies or other drugs. All reported an improvement in general anxiety symptoms after taking the AGC drug, as well as some specific PTSD symptoms, such as nightmares, difficulty concentrating and feeling numb. This was a low quality study because there was no comparison group and no follow-up of the women to see whether the benefits lasted more than a couple of weeks.

OCD

There has only been a single case study of an AGC in a person with OCD. There was no benefit from the AGC alone, although symptoms improved when the AGC was combined with an antidepressant.

Other types of anxiety

There is no evidence on whether AGCs work for GAD, social phobia, panic disorder or specific phobias.

Are there any risks?

AGCs can cause a number of side-effects, including rash, fatigue, constipation, appetite changes, and sleep problems.

Recommendation

There has not been any good quality research on whether AGCs are useful for treating anxiety. More studies are needed before any benefits of AGCs can be known.

Antihistamine drugs

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

What are they?

Antihistamines are drugs that are commonly used to treat allergies. A common side-effect of these drugs is sedation – or feeling drowsy and calm – and it is for this reason that they have been used to treat anxiety. Some antihistamines can be bought without a prescription, however people should consult their doctor about whether these drugs may be helpful for treating their anxiety, and if yes, which type of antihistamine to use.

How are they meant to work?

Antihistamines work by blocking the neurotransmitter histamine, which is involved in the body's alertness.

Do they work?

GAD

A review pooled the results of five good quality studies that compared the antihistamine drug hydroxyzine to placebo or another treatment in people with GAD. There were over 880 people included in these combined studies, and treatment in most studies lasted four weeks. The results showed that hydroxyzine is more effective than placebo in reducing anxiety symptoms, and just as effective as other types of anti-anxiety drugs (e.g. benzodiazepines).

Other types of anxiety

There is no evidence on whether antihistamines alone work for other types of anxiety.

Are there any risks?

The most common side-effect is sedation. Other side-effects from high doses can include weakness and poor coordination.

Recommendation

There is evidence that the antihistamine hydroxyzine is helpful in the short term in reducing anxiety symptoms in people with GAD. There are no good quality studies of this drug for the treatment of other types of anxiety.

Antipsychotic drugs

Evidence rating

GAD	👍👍👍	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Side-effects include dry mouth, weight gain, feeling sedated or drowsy and movement problems in the limbs and face. Different antipsychotics may produce different side-effects.

What are they?

Antipsychotics are usually used to treat psychotic disorders, such as schizophrenia. They can only be prescribed by a doctor. Newer antipsychotic drugs (called 'atypical' antipsychotics) may also help to reduce anxiety symptoms. Older antipsychotics (called 'typical' antipsychotics) have more side-effects and are rarely used for treating anxiety. Antipsychotics are usually used to treat more severe types of anxiety that haven't responded to psychological therapies or other drugs. These drugs are most commonly used in combination with other drugs (e.g. antidepressants), but can be used on their own. Here, we have reviewed studies in which antipsychotics are used as the main treatment.

How are they meant to work?

Different types of antipsychotics work in different ways, but they all act on chemicals in the brain.

Do they work?

GAD

Three large studies have compared the 'atypical' antipsychotic quetiapine to placebo (dummy) pills. In two of the studies, involving 873 and 951 people, the treatment lasted for eight to 10 weeks. The results showed that the antipsychotic drug improved anxiety more than the placebo, and in one of the studies, was as effective as an antidepressant drug. A third study of 433 people provided treatment for up to one year. The group taking the antipsychotic drug again had lower anxiety symptoms and fewer relapses than the group receiving the placebo.

PTSD and ASD

Three studies have compared an antipsychotic drug to placebo (dummy) pills, with mixed results. In one study, the antipsychotic was no better than placebo in reducing PTSD symptoms, but in the other two studies, the antipsychotic drug was more effective. There have been a number of other studies that have compared an antipsychotic drug to placebo, but in these studies the participants have been on other drugs at the same time (e.g. antidepressants or benzodiazepines). This makes it difficult to tell if the benefits were due to the antipsychotic drug or the other drugs.

Social phobia

Two small studies have compared an antipsychotic drug with a placebo over eight weeks of treatment. One study showed that the antipsychotic drug was more effective than the placebo, but the other study did not. Another study tested whether a single dose of an antipsychotic was better than placebo at reducing symptoms of anxiety associated with public speaking. The antipsychotic was no better than placebo, and caused more unpleasant side-effects.

Panic disorder and agoraphobia

There are no studies comparing an antipsychotic drug to placebo in people with panic disorder. One study compared an antipsychotic to an antidepressant drug in 56 people and found that both drugs helped reduce symptoms of anxiety. However there was no control group in this study (e.g. a placebo), so it cannot be known if they would have improved without any active treatment.

Specific phobias

One study compared a single dose of an antipsychotic drug to a benzodiazepine or a placebo in 90 people who were anxious prior to having minor dental surgery. The results showed that the antipsychotic drug was more effective than the other drug and placebo in reducing anxiety in the very short term (e.g. three hours after being taken).

OCD

There are no studies on whether antipsychotic drugs alone work for OCD. Good quality studies have only tested the effects of adding an antipsychotic to existing treatments (such as medications or CBT).

Are there any risks?

Common side-effects of antipsychotics include dry mouth, weight gain, feeling sedated or drowsy, and movement problems in the limbs and face. There is also evidence from one study that long-term use of antipsychotics may potentially lead to brain shrinkage, although more research is needed to confirm this finding. Different antipsychotics may produce different side-effects. Some of these may need to be checked often.

Recommendation

Overall there is limited evidence for the effectiveness of antipsychotics alone to treat anxiety. There is emerging evidence that these drugs are helpful for people with GAD. The results to date are mixed for PTSD and there is not enough research on other types of anxiety. More research is needed in this area.

Azapirone drugs

Evidence rating

GAD	👍👍👍	Panic disorder and agoraphobia	👎
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Side-effects include drowsiness, feeling dizzy, nausea, sleep problems (insomnia) and feeling lightheaded.

What are they?

Azapirones (AZPs) are drugs that are used to treat a range of mental health problems, including anxiety, depression and psychosis. They can be used on their own, or along with another drug (such as an antidepressant). The most commonly used AZP is buspirone. These drugs can only be prescribed by a doctor.

How are they meant to work?

Azapirones work on chemicals in the brain. These drugs act in a similar way to benzodiazepines (see page 57) by working relatively fast to reduce anxiety symptoms. However unlike benzodiazepines, these drugs can be used for longer periods of time as they are not addictive.

Do they work?

GAD

A review pooled the results of nine good quality studies that compared AZPs to either placebo or another anti-anxiety drug. AZPs were more than effective than placebo in three out of four studies. However they did not appear to be superior to other anti-anxiety drugs (e.g. benzodiazepines).

Social phobia

One study gave 30 people with social phobia either an AZP (buspirone) or placebo for three months. The results showed no difference between groups in anxiety symptoms at the end of the study.

Panic disorder and agoraphobia

Three high quality trials have compared an AZP (buspirone) to placebo. In each study, the AZP was found to be no better than placebo in reducing panic attacks and anxiety symptoms.

Other types of anxiety

There is no evidence on whether azapirone drugs alone work for specific phobias, PTSD or OCD.

Are there any risks?

Azapirones can cause a number of side-effects, including drowsiness, dizziness, nausea, weakness, insomnia and lightheadedness.

Recommendation

There is mixed evidence for the effectiveness of azapirones for the treatment of anxiety. These drugs appear to be effective for people with GAD. However they are not helpful for panic disorder. There is not enough evidence yet as to whether they are useful for social phobia.

Benzodiazepines

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

Prolonged use of benzodiazepines can cause dependence (or addiction). These drugs are also associated with a range of side-effects, including memory loss and drowsiness.

What are they?

Benzodiazepines (BZDs; also known as 'benzos') are used as a short-term treatment for intense anxiety. Common types of BZDs include alprazolam (brand name Xanax), clonazepam (Rivotril), diazepam (Valium) and oxazepam (Serepax). These drugs can only be prescribed by a doctor.

How are they meant to work?

BZPs work on chemicals in the brain. These drugs tend to work very fast in reducing anxiety symptoms.

Do they work?

GAD

A review of a number of good quality studies found that BZDs are generally more effective than placebo (dummy) pills in reducing anxiety symptoms. However, most studies only lasted for four weeks. This suggests that these drugs are only effective in the short term. Longer-term use of BZDs does not appear to be helpful. This is because most people do not recover from GAD when taking these drugs on their own.

PTSD and ASD

One small but good quality study compared a BZD to placebo among adults. The BZD was no better than placebo in improving PTSD symptoms over the five weeks of the study.

Social phobia

Three good quality studies have compared a BZD to a placebo in social phobia. All found that the BZD was better than placebo in the short term (e.g. over three months).

Panic disorder and agoraphobia

A number of good quality studies have compared BZDs with a placebo pill for the treatment of panic disorder (with and without agoraphobia). These studies show that BZDs are more effective than placebo in reducing panic attacks and anxiety in the short term. However, they are not as effective as other drugs (e.g. antidepressants; see page 50) in the longer term.

Specific phobias

Two good quality studies have compared a BZD to placebo in people with specific phobias. In both studies, the BZD was better than placebo in reducing immediate anxiety levels. However, both studies showed poor outcomes when used over a longer period of time. After one week or three months, anxiety levels in the BZD groups had either returned to pre-treatment levels, or become worse.

OCD

One study compared a BZD to placebo in 27 adults with OCD. Only three people had improved after 10 weeks of treatment. Overall, the BZD was not more effective than placebo.

Are there any risks?

Long-term use of anti-anxiety drugs can cause addiction, and may impair cognition (e.g. cause problems with attention, memory or planning). There can also be a range of short-term side effects such as sleepiness, dizziness and headache.

Recommendation

There is evidence that benzodiazepines are effective in the immediate or short-term for reducing symptoms of panic disorder, GAD and social phobia. These conditions are experienced for a longer period in most people than the recommended duration of BZD use and symptom recurrence is common once the treatment is stopped unless an alternative treatment is provided. The evidence suggests that these drugs are not effective for specific phobias. There is not enough good quality research as to whether they are useful for PTSD and OCD.

Beta-blockers

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	👎	OCD	?

Common side-effects of these drugs include nausea, diarrhoea, fatigue, dizziness, vision problems and poor concentration. These drugs should be avoided by people with asthma, as well as those with heart disease.

What are they?

Beta-blockers are drugs that can help reduce some symptoms of anxiety, such as a fast heart rate, rapid breathing or tremor (shakes). They are mainly used to treat heart conditions and high blood pressure. However they are also used for social phobia and performance anxiety (e.g. stressful events such as public speaking or performing). They can only be prescribed by a doctor.

How are they meant to work?

Beta-blockers act on the body's 'fight-flight response'. They reduce a person's heart rate caused by over-excitement, physical activity or anxiety. It has been argued that taking a beta-blocker immediately after a traumatic event (e.g. in the emergency room after a car accident) might block memories of the event and therefore reduce the chance of developing PTSD.

Do they work?

GAD

A number of studies have compared a beta-blocker to placebo (dummy) pills and/or other anti-anxiety drugs in people with chronic anxiety. The results have been mixed. Some studies showed that the beta-blocker was better than placebo, while others showed that they were no more effective than placebo. In most studies, beta-blockers were not as effective as the other anti-anxiety drugs.

PTSD and ASD

Two small but good quality studies have compared a beta-blocker with a placebo (and in one study, another anti-anxiety drug) given immediately to people after they experienced a traumatic event. One study found the beta-blocker to be more effective than placebo at reducing PTSD symptoms, but the other did not. There have been other low quality studies in which beta-blockers have been used to treat PTSD in adults and children. The results of these studies are also mixed, with only some showing any benefit.

Social phobia

Two studies have compared a beta-blocker to placebo or another anxiety treatment over several months. In both studies, the beta-blocker was no better than placebo. In one of the studies, the beta-blocker was less effective compared to an antidepressant drug.

Panic disorder and agoraphobia

One study compared a beta-blocker, a benzodiazepine and a placebo in people with panic disorder over five weeks. The results showed that the beta-blocker was no better than placebo in reducing anxiety symptoms or the number of panic attacks.

Other types of anxiety

There is no evidence on whether beta-blockers work for specific phobias or OCD.

Are there any risks?

Beta-blockers can cause a range of side-effects, including nausea, diarrhoea, fatigue, dizziness, vision problems and poor concentration. However, most people can cope with these side-effects. These drugs should be avoided by people with asthma as they can affect the bronchial muscle. They should also be avoided by people with cardiovascular (heart) disease.

Recommendation

There is mixed evidence on beta-blockers for anxiety. The evidence suggests that these drugs are not effective for social phobia. There is not enough good quality research as to whether they are useful for other types of anxiety.

D-Cycloserine (DCS) with exposure therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	👍👍👍
PTSD and ASD	?	Specific phobias	?
Social phobia	👍👍👍	OCD	👍👍👍

Side-effects can include headache and irritability, and in more extreme cases, convulsions and depressive symptoms.

What is it?

D-Cycloserine (DCS) is an antibiotic that has mainly been used in the treatment of tuberculosis (antibiotics are a type of drug used to treat infections that are caused by bacteria). This drug can only be prescribed by a doctor.

How is it meant to work?

Research indicates that DCS can stimulate or improve learning. The drug is not used by itself to treat anxiety, but is taken before sessions of exposure therapy (see page 21), to help the person learn that the thing they fear is safe. DCS works by enhancing the neurotransmitter GABA, which helps to decrease over-activity of the central nervous system.

Does it work?

GAD

No studies have examined DCS for the treatment of GAD.

Panic disorder and agoraphobia

Two good quality studies compared DCS or placebo, added to exposure therapy for people with panic disorder. The medications (DCS or placebo) were given one hour before the therapy sessions, and each study involved three to four sessions in total. The results showed that the groups that received the DCS before their exposure treatment had lower levels of anxiety at the end of treatment compared to the placebo groups.

PTSD and ASD

Two studies have compared DCS or placebo, along with exposure therapy in people with PTSD. In the first study, people with a range of trauma experiences were given the medications one hour before the therapy sessions (there were between seven and 10 treatments overall). The results showed no difference in PTSD symptoms at the end of treatment between the two groups. The second study involved people with combat-related PTSD. They received either DCS or placebo 30 minutes before exposure therapy (which lasted for four sessions). The results showed that the placebo was superior to DCS in reducing PTSD symptoms.

Social phobia

Two trials compared DCS or placebo, added to exposure therapy for people with social phobia. The medications (DCS or placebo) were given one hour before the therapy sessions and each study involved four sessions in total. The groups that received the DCS before their exposure treatment had lower levels of anxiety at the end of treatment compared to the placebo groups.

Specific phobias

One good quality study compared DCS or placebo, added to exposure therapy in people with a fear of heights. The medications (DCS or placebo) were given three hours before two therapy sessions. The group that received the DSC had a greater reduction in anxiety symptoms than those that received the placebo. These benefits lasted for at least three months.

OCD

Four trials compared DCS or placebo, along with exposure therapy in people with OCD. The medications (DCS or placebo) were given either one, two or four hours before the exposure therapy, and each study involved between four and 10 sessions in total. One study involved children with OCD. A pooling of the results from the four studies showed that, overall, the groups that received the DCS before their exposure treatment had

lower levels of obsessive and compulsive symptoms at the end of treatment compared to the placebo groups. However, in one of the adult studies, there was no difference between the DCS and placebo groups at the end of treatment.

Are there any risks?

Side-effects can include headache and irritability, and in some cases, convulsions, psychosis and depression. However, very low doses of DCS are used in treatment, so the risk of side-effects is usually low.

Recommendation

There is promising research about the benefits of adding DCS to exposure therapy in patients with OCD, Social Phobia and Panic Disorder. However, more research is needed before we can be as confident of these results as for other treatments. There are mixed findings for the effectiveness of DCS in PTSD and no studies have examined this treatment for GAD.

Deep brain stimulation (DBS)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD (severe OCD that hasn't responded to other treatment)	👍👍👍

Serious risks are associated with DBS, including infection from the surgery, damage to the brain, which might affect movement, memory or the senses, and changes in personality.

What is it?

DBS is a type of brain stimulation. It requires surgery to implant a device (called a 'brain pacemaker') and wiring under the skin into the chest, neck and brain. The pacemaker is usually placed under the skin near the shoulder. Wiring then goes from the pacemaker, into the neck and then connects to an 'electrode' that is placed in the brain. This sends electric impulses to the part of the brain that needs stimulating. Different brain areas are targeted for different disorders. DBS has mostly been used for people with Parkinson's disease. With anxiety, DBS has only been used to treat severe OCD that has not responded to other treatments.

How is it meant to work?

It is not known exactly how DBS works, other than stimulating parts of the brain.

Does it work?

OCD

There have been several small but good quality studies of DBS for severe OCD. In one study, 16 people had DBS devices implanted. At different times over six months, they received either active (real) or 'sham' (fake) stimulation. The results showed that OCD symptoms improved more with active DBS compared to the sham condition, and in four cases, the participants had recovered (e.g. they were no longer troubled by OCD symptoms). However there were a number of serious adverse events in the sample, including one person who had a brain haemorrhage (bleeding). In another study, 14 people were given 'real' or 'sham' DBS over a two week period. There was a 25 per cent improvement in OCD symptoms during the real treatments compared to the sham DBS. Other than one infection from surgery, there were no serious side-effects. After the real versus sham study phase, participants continued on with real DBS and improvements in symptoms were seen up to a year later. A third study of real versus sham DBS in 10 people found a noticeable improvement in symptoms for four participants during real treatment. A fifth person improved some months after receiving the DBS.

Other types of anxiety

Deep brain stimulation has not been used in any studies of people with GAD, PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

There are serious risks involved in deep brain stimulation. These can include damage to the brain which might affect movement, memory or the senses (e.g. seeing or hearing). It can also cause changes in personality. There are also risks of infection from surgery.

Recommendation

DBS appears promising for some people with severe, long-standing OCD that hasn't responded to other treatments such as exposure therapy or medication. But not all benefit from DBS. More high quality research is needed to understand for which people DBS works best.

Electroconvulsive therapy (ECT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Common side-effects of ECT are short-term confusion and memory problems.

What is it?

In ECT, electrical currents are passed though the brain to cause a seizure. The treatment is given under a general anaesthetic, along with muscle relaxants. Usually a series of ECT treatments are given over several weeks. ECT is most often used for severe depression that has not responded to other treatments, or where there is a risk of death from suicide or refusal to eat or drink. It may also be used for severe anxiety that has not responded to other treatments. ECT may also be known as 'electroshock therapy'.

How is it meant to work?

It is not understood exactly how ECT works to treat anxiety, other than stimulating parts of the brain.

Does it work?

OCD

There have only been case studies of ECT for adults with severe, long-standing OCD that hasn't improved with drug or psychological therapies. A review of 32 cases found that ECT improved OCD symptoms for most people for up to one year. However these were poor quality studies with no comparison groups.

PTSD and ASD

One study tested ECT in 20 people with severe PTSD that had not responded to other treatment (e.g. antidepressant drugs or CBT). Six ECT treatments were given, two times a week. The results showed that PTSD symptoms had reduced by the end of treatment. However this is not a high quality study as there was no comparison group (e.g. sham or fake ECT).

Other types of anxiety

There is no evidence on whether ECT works for GAD, social phobia, panic disorder or specific phobias.

Are there any risks?

The most common side-effects of ECT are confusion and memory problems. These usually only occur in the short term. There are also risks associated with having a general anaesthetic.

Recommendation

There is not enough good quality evidence as to whether ECT is helpful for severe OCD or PTSD. ECT has not been tested in any other types of anxiety.

Glucocorticoid drugs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Long-term use of these drugs can cause weight gain and easy bruising.

What are they?

Glucocorticoids are stress hormones that are released as part of the body's 'fight-or-flight' response system. There are drugs available that act like these hormones. These drugs can only be prescribed by a doctor.

How are they meant to work?

There is evidence that glucocorticoids can change memory processes, by making it easier to forget things. Since traumatic or fearful memories are associated with PTSD and specific phobias, it has been suggested that glucocorticoids may be helpful in treating these conditions by making it harder to remember fearful memories.

Do they work?

PTSD and ASD

There has been one small study of the use of glucocorticoid drugs in three people with long-standing PTSD. Over three months, the trio received either glucocorticoid drugs or placebo (dummy) pills. Each person had fewer intrusive memories or nightmares when taking the glucocorticoid drugs, compared to the placebo condition.

Social phobia

One study compared glucocorticoid drugs to placebo pills in 20 people with social phobia who were exposed to a stressful situation (performing in front of an audience). The group that received the glucocorticoid drugs reported less fear and anxiety than those in the placebo group. The same researchers also gave either a glucocorticoid drug or placebo to 20 people who were not exposed to a stressful condition. There were no differences in fear symptoms between the two groups.

Specific phobias

In one good quality study, 20 people with spider phobias were given either a glucocorticoid drug or a placebo an hour before being shown a photograph of a spider. This procedure was repeated six times over a two-week period. The group that received the glucocorticoid drug reported less fear immediately after seeing the image of the spider than the placebo group. Another study gave 40 people with a fear of heights either a glucocorticoid drug or placebo one hour before they had an exposure therapy session. There were three treatment sessions overall. The results showed that the group that received the glucocorticoid drug had less fear of heights than the placebo group, both at the end of treatment and one month later.

Other types of anxiety

There is no evidence on whether glucocorticoid drugs are an effective treatment for GAD, panic disorder or OCD.

Are there any risks?

Prolonged use of glucocorticoid drugs can cause weight gain and easy bruising. It is not known whether these drugs cause other memory problems.

Recommendation

There is promising research that glucocorticoid drugs may be helpful for treating the fear and anxiety associated with PTSD and phobias. However more research is needed before we can be confident of the effectiveness of these drugs, either when used alone or coupled with exposure therapy. Most studies to date show that they may temporarily reduce anxiety, rather than being helpful over longer periods of time.

Lithium

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Common side-effects include headaches, nausea, and feeling dazed. High levels of lithium in the blood can be toxic and cause more serious side-effects, including death. People taking lithium must have their blood monitored to make sure the dose is at a safe level.

What is it?

Lithium is a drug that is mainly used to treat bipolar disorder (previously called manic depression). It has also been used to treat depression. Because depression and anxiety often occur together, lithium may be used to treat severe types of anxiety. Lithium can only be prescribed by a doctor. Lithium may be used in combination with other drugs. Here, we have reviewed studies in which lithium is used as the main treatment.

How is it meant to work?

It is not clear how lithium works to treat anxiety, other than to act on neurotransmitters (chemical messengers) in the brain.

Does it work?

PTSD and ASD

Lithium treatment for PTSD has only been examined in a series of case studies without comparison groups. The largest study involved 14 people who had not had any benefit from other drug treatments. Eight of the 14 people reported an improvement in nightmares, jumpiness ('startle responses') and feeling out of control. Of the remaining participants, two did not improve on lithium and two stopped taking the drug due to side-effects.

Other types of anxiety

There is no evidence on whether lithium works for GAD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Common side-effects of lithium include headaches, nausea, and feeling dazed. High levels of lithium in the blood can be toxic and cause more serious side-effects, including tremor and convulsions, and in some cases death. People taking lithium must have their blood monitored to make sure the dose is at a safe level.

Recommendation

There is little evidence for the use of lithium as a stand-alone treatment for anxiety.

Psychosurgery (aka 'neurosurgery')

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

There are serious risks involved in psychosurgery, including damage to the brain, which might affect movement, memory or the senses, and changes in personality. Psychosurgery cannot be reversed.

What is it?

In psychosurgery, a very small cut or burn (a 'lesion') is made to a part of the brain. In anxiety, the lesions are made in the parts of the brain that control emotions. Psychosurgery has only been used for severe, chronic and very disabling OCD that has not improved with other types of treatment. It is considered a 'treatment of last resort' because the surgery cannot be undone (i.e. it is not reversible).

In Australia, psychosurgery must be approved by a State Psychosurgery Review Board (which might be named differently in each state or territory). Only certain neurosurgeons are allowed to perform this kind of surgery.

How is it meant to work?

It is not known exactly how psychosurgery works. It may work by 'interrupting' brain processes that are causing symptoms.

Does it work?

OCD

A number of studies have compared the severity of OCD symptoms before and after psychosurgery. In all studies, the participants had severe, long-standing OCD that had not responded to other treatments. Overall, the studies show that many, but not all, people improve after the surgery. Some studies showed that the benefits lasted many years after the surgery.

Other types of anxiety

No studies have examined whether psychosurgery works for GAD, PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

There are many serious risks involved in psychosurgery. These can include damage to the brain, which might affect movement, memory or the senses (e.g. seeing or hearing). It can also cause changes in personality. Psychosurgery cannot be reversed.

Recommendation

Psychosurgery has only been used in people with severe, chronic and disabling OCD. The evidence from these studies suggests there may be some benefit, but not for all. This treatment is considered a treatment of 'last resort' treatment because of the risk of serious side-effects. This treatment has not been studied in people with other types of anxiety.

Stimulant drugs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Side-effects include headache, insomnia, lack of appetite and nausea. Stimulants can be highly addictive and may lead to abuse or dependence. Because these drugs 'stimulate' the brain, they may trigger panic attacks or increase anxiety.

What are they?

Stimulants help improve alertness and energy levels and are usually used to treat attention deficit hyperactivity disorder (ADHD). They are rarely used to treat anxiety alone. They may be used to manage certain symptoms that may occur with anxiety, such as lack of energy or poor concentration. Only a doctor can prescribe these drugs. Common types of stimulants include amphetamines, methylphenidate (brand name Ritalin) and modafinil.

How are they meant to work?

Most stimulants work by increasing the activity of neurotransmitters (chemical messengers) in the brain. The effect of these drugs is usually felt quite quickly.

Do they work?

PTSD and ASD

There are only case reports of the use of stimulants for treating PTSD. In one study, three people with combat-related PTSD who had not benefitted from a range of other medications were prescribed a stimulant. Each patient experienced an improvement in their PTSD symptoms, as well as their attention and ability to concentrate and focus at work/college. It is not clear though how long these benefits lasted, or for how long the drugs were taken. In another case, an adult with PTSD experienced some improvement in symptoms after taking a stimulant drug for six weeks. However the drug was prescribed to treat the person's obesity rather than their PTSD.

Other types of anxiety

There is no evidence on whether stimulant drugs work for GAD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Side-effects include headache, difficulty sleeping, a lack of appetite and nausea. Because these drugs 'stimulate' the brain, there is the possibility that they may trigger panic attacks or *increase* symptoms of anxiety. Stimulants can be highly addictive and may lead to abuse or dependence in some people.

Recommendation

There is currently no good quality evidence as to whether stimulant drugs are helpful for managing anxiety.

Transcranial magnetic stimulation (TMS)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	👍👍👍	Specific phobias	?
Social phobia	?	OCD	👎

There is a low risk of seizure with TMS given the use of electric currents. Other side-effects on memory, attention and concentration are still being studied.

What is it?

TMS is a type of brain stimulation. A metal coil that contains an electric current is held to the side of the head. This produces a magnetic field that stimulates parts of the brain. TMS is usually given daily or several times a week. It is mainly used for people with severe and long-standing anxiety who have not benefited from other medical treatments or psychological therapies.

How is it meant to work?

It is not known exactly how TMS works, other than stimulating parts of the brain.

Does it work?

GAD

One study gave 10 people with GAD TMS six times over three weeks. After treatment, the study participants reported a decrease in their anxiety symptoms. However this was not a high quality study as there was no control group that received a sham (fake) TMS treatment.

PTSD and ASD

Three good quality studies have compared actual versus sham TMS in people with PTSD. In one study, 30 people received 10 treatments over two weeks. The results showed that actual TMS was more effective in reducing PTSD symptoms than the sham treatment. These benefits remained for three months after treatment. Another study gave 24 people real or sham TMS daily for 10 days. The results showed that actual TMS was better than the sham treatment in reducing both PTSD and general anxiety symptoms. A smaller study in nine patients found that actual TMS was better at reducing PTSD symptoms than sham treatment when combined with exposure therapy (see page 21).

Panic disorder and agoraphobia

One study involved 15 people whose panic disorder had not improved with antidepressant drugs. They were given either actual or sham TMS each day for 10 days. All continued taking medication. The results showed no difference between the groups in reducing panic and anxiety symptoms.

OCD

There have been seven good quality studies that have given adults with OCD either actual TMS or a sham treatment. In six of the studies there was no difference in the severity of OCD symptoms between the active and the sham TMS groups at the end of the treatments.

Other types of anxiety

There is no evidence on whether TMS works for social phobia or specific phobias.

Are there any risks?

There is a low risk of seizure with TMS. The effects of TMS on memory, attention and concentration are not yet understood.

Recommendation

There is evidence from two studies that TMS might be a promising treatment for PTSD. The current research suggests that it is not an effective treatment for OCD. There is not enough evidence yet to say whether TMS is effective for treating panic disorder or GAD.

Vagus nerve stimulation (VNS)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

VNS requires surgery to implant a device, so it is a highly invasive procedure. Voice changes are common and neck pain can also occur.

What is it?

VNS is a type of brain stimulation. It requires surgery to insert a device (like a 'pacemaker') and wiring under the skin in the chest and neck. This sends electric signals to the vagus nerve, which is connected to the brain. VNS has mostly been used for people with severe depression or epilepsy.

How is it meant to work?

This is unclear, but it is thought to affect brain chemistry and blood flow to different parts of the brain.

Does it work?

OCD, PTSD and panic disorder

There has only been one study of VNS in people with a range of different types of anxiety that had not responded to previous medications or psychological treatments. VNS devices were implanted in seven people with OCD, two with PTSD and one with panic disorder. All were allowed to keep using any medications they were receiving. The results showed that only three people (with OCD) had improved by the end of the study (12 weeks later). Four people were reported to have continued using VNS four years after it was implanted (two with OCD, one with PTSD and one with panic disorder). Their anxiety symptoms were lower than at the start of treatment. The study was low quality however, because VNS was not compared to a control or fake treatment (e.g. 'sham' VNS).

Other types of anxiety

There is no evidence on whether VNS works for GAD, social phobia or specific phobias.

Are there any risks?

As surgery is involved in VNS, it is a highly invasive procedure. Voice changes are common and neck pain can also occur.

Recommendation

There is not enough evidence to say whether or not VNS works for anxiety disorders.

Complementary and lifestyle interventions

Acupuncture

Evidence rating

GAD	👍👍👍	Panic disorder and agoraphobia	?
PTSD and ASD	👍👍👍	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Acupuncture is a technique of inserting fine needles into specific points on the body. The needles are usually rotated by hand. They can also have an electric current applied to them. A laser beam can be used instead of needles. Acupuncture can be given by a medical doctor or by a Chinese medicine practitioner. The Chinese Medicine Board of Australia regulates all Australian Chinese medicine practitioners. Acupuncture is not covered by Medicare unless it is provided by a medical doctor. It may be available as an extra with private health insurance.

How is it meant to work?

This is not clear. Traditional Chinese medicine says it works by correcting the flow of energy in the body. According to Western medicine, it may stimulate nerves. This results in the release of neurotransmitters (chemical messengers) in the brain.

Does it work?

GAD

Seven studies have evaluated acupuncture for GAD in adults. These compared acupuncture with sham (fake) acupuncture, behaviour therapy or different drugs. Positive results for acupuncture were generally found. However the studies were not high in scientific quality.

PTSD and ASD

One study has been carried out in 84 adults with PTSD. One group received a one-hour session of acupuncture twice a week. Another group received a two-hour session of cognitive behaviour therapy (CBT; see page 24) once a week. A comparison group received no treatment. The study lasted for 12 weeks. At the end of the study, symptoms had improved in the acupuncture and CBT groups but not in the control group. These improvements were maintained three months later.

Another study used electro-acupuncture to treat 91 people with PTSD. People who were traumatised by a recent earthquake received either CBT or CBT plus acupuncture. Treatment was given for one week in 30-minute sessions every second day. Both treatments improved PTSD symptoms, but the group treated with CBT plus acupuncture improved the most.

OCD

One study was carried out in 60 people with OCD. Treatment consisted of an antidepressant or an antidepressant plus daily acupuncture sessions. The study lasted for eight weeks. Most people improved, but the antidepressant plus acupuncture treatment was more effective.

Another study tested electro-acupuncture in 19 people with OCD who had not improved with other treatment. Half of the participants received 12 sessions of acupuncture over three weeks. Both groups continued to take their medication. The acupuncture group improved more than the group that did not receive acupuncture.

Other types of anxiety

There is no evidence on whether acupuncture works for social phobia, panic disorder or specific phobias.

Are there any risks?

Acupuncture is not free of risk, but is relatively safe when practiced by an accredited professional. Minor bleeding and bruising may occur.

Recommendation

There is some evidence that acupuncture is effective for GAD and PTSD. There is not enough good evidence to say whether acupuncture works for other types of anxiety.

Alcohol

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Repeated alcohol use can worsen anxiety. Alcohol abuse can have serious health consequences, such as liver disease and brain damage. Intoxication (drunkenness) may lead to violence and antisocial behaviour, and increases the risk of accidents and injury.

What is it?

Some people with anxiety drink alcohol in an attempt to relieve feelings of anxiety.

How is it meant to work?

Alcohol could work in a similar way to the benzodiazepine drug diazepam. It could also work by reducing tension in anxious situations or because the person drinking alcohol believes it will help.

Does it work?

Social phobia

Two studies have looked at whether alcohol reduces anxiety caused by having to give a public speech. Participants who drank alcohol had less anxiety than those who didn't. However, a non-alcoholic placebo drink reduced anxiety as much as the alcoholic drink. This suggests that alcohol reduced anxiety mainly because people expected it would.

Panic disorder and agoraphobia

Two studies have been carried out in people with panic disorder. Participants drank an alcoholic drink or a non-alcoholic (placebo) drink. They then did a test designed to trigger panic attacks. Both studies showed that anxiety was lower in the alcohol group than the placebo group. However, one of these studies also showed that beliefs about alcohol and anxiety were important. Those who thought alcohol would reduce anxiety experienced less anxiety, even when they had consumed the placebo drink.

Specific phobias

Four studies have been carried out in people with specific phobias, such as fear of snakes and mice. Some of these studies showed that alcohol reduced anxiety, but not all.

Are there any risks?

Although alcohol may decrease anxiety for a short while, repeated use can worsen anxiety. This can occur through changes in the brain, by disrupting the learning processes that teach a person not to be anxious, or by disrupting social or work life. Alcohol abuse can lead to liver and brain damage.

Recommendation

Some studies suggest that alcohol can reduce anxiety in the short term, particularly if one believes it will. However, alcohol should not be used to cope with anxiety because with repeated use it may worsen anxiety. Repeated use can cause dependence and long-term use can cause severe health problems.

Aromatherapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Aromatherapy is the use of essential oils for healing. Essential oils are highly concentrated extracts of plants. They can be diluted in carrier oils and absorbed through the skin or heated and vaporised into the air. They are not taken by mouth.

How is it meant to work?

This is not known. Mood could be affected by the pleasant odour or by memories and emotions that are triggered by the smell. Alternatively, the oil's chemical components may have drug-like effects.

Does it work?

One study has been carried out in six adults with anxiety and depression. They received an hour-long aromatherapy massage weekly for six weeks. Choice of essential oils was specific to each adult. Anxiety improved immediately after the massages, as well as over the six weeks. However, there was no comparison group that did not receive treatment.

Are there any risks?

Essential oils should not be used undiluted as they can irritate the skin. Some oils may interact with conventional medicine. Some essential oils are not recommended for use during pregnancy.

Recommendation

There is not enough good evidence to say whether aromatherapy works.

Ashwagandha

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Ashwagandha (*Withania somnifera*) is a herb that originated in India. It is used to treat a number of health problems, including stress and anxiety.

How is it meant to work?

This is not understood. It is thought that ashwagandha might act like the anti-anxiety medication diazepam (see page 57).

Does it work?

One study has been carried out in 39 people with a range of anxiety types. One group took a daily dose of 500mg ashwagandha and one group took placebo (dummy pills). After six weeks, people in the ashwagandha group had lower symptoms of anxiety.

Are there any risks?

None were found in the study above.

Recommendation

While there is some initial positive evidence, more studies are needed to say whether ashwagandha works.

Autogenic training

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Autogenic training is a relaxation method. It involves regular practice of simple mental exercises in body awareness. These exercises involve concentrating on breathing, heartbeat, and warmth and heaviness of body parts.

How is it meant to work?

Autogenic training aims to improve a person's ability to relax by retraining the mind to calm itself.

Does it work?

GAD

One small study in adults with GAD compared autogenic training with either anti-anxiety drugs or breathing training. Training sessions were three times a week for six weeks, followed by a session once a month for four months. All treatments led to decreases in anxiety symptoms. However, improvement was greater in the autogenic training and breathing training groups compared with the drug group.

Another study compared autogenic training to progressive relaxation training in adults with phobia or GAD. Participants had six weekly 30-minute training sessions plus daily practice at home with an audiotape. Many stopped treatment before the end of the study. Autogenic training was better than relaxation training in reducing anxiety. However, there was no comparison with a group that did not receive any treatment.

PTSD and ASD

There has been one case report of autogenic training successfully treating nightmares caused by PTSD. However, no scientific studies have been carried out.

Social phobia

One study compared the effects of adding autogenic training to cognitive behaviour therapy (CBT; see page 24) for social phobia. One group received CBT plus autogenic training. Another group received CBT only. More people recovered in the group that received autogenic training.

Panic disorder and agoraphobia

One study compared autogenic training with exercise. Adults with panic disorder were trained in aerobic exercise or autogenic training for a 10-week period. Both treatments improved panic symptoms a similar amount. However there was no comparison with a group that did not receive treatment.

One small study has compared autogenic training with hypnosis. Adults with panic disorder had group sessions of autogenic training or hypnosis for six weeks. Both groups benefited and improvements lasted for three months. However, there was no comparison with a group that did not receive treatment. There are also reports of autogenic training combined with behaviour therapy successfully treating panic disorder.

Specific phobias

There is no evidence on whether autogenic training works for specific phobias, although one study has looked at autogenic training for GAD and phobias (see GAD above).

OCD

One small study has been carried out on adults with OCD. Autogenic training was given with a dummy pill and compared with two treatments: behaviour therapy plus dummy pill and autogenic training plus an antidepressant (see page 50). The autogenic training and dummy pill treatment was less effective than the other two treatments.

Are there any risks?

None are reported.

Recommendation

The evidence for autogenic training for anxiety is not clear. Better quality studies are needed before firm conclusions can be made.

Ayurveda

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Ayurveda is the traditional healing system of India. Ayurveda translates as 'knowledge of living'. It aims to improve health and vitality through nutrition, lifestyle and herbal medicines.

How is it meant to work?

Ayurvedic medicines are a traditional treatment. Treatments are derived from over thousands of years of use in India.

Does it work?

GAD

A traditional Ayurvedic herbal medicine was compared with a placebo (dummy pill) in 10 people with GAD. The medicine contained *Withania somnifera, Tinospora cordifolia, Bacopa monniera,* muskroot, aloeweed, licorice, pearl pisti and ginger. After three months of treatment, the medicine group had lower anxiety than the placebo group.

Other types of anxiety

There is no evidence on whether ayurveda works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

No side-effects were reported in the above study.

Recommendation

There is not enough evidence to say whether or not Ayurveda works.

Bach flower remedies

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Bach (pronounced 'batch') flower remedies are a system of highly diluted flower extracts. A popular combination of five remedies is sold as Rescue Remedy®.

How is it meant to work?

Bach flower remedies are claimed to contain small amounts of the plant's life force energy, which heals emotional imbalances.

Does it work?

One study gave Rescue Remedy® or water and alcohol drops to people with anxiety. Participants were told to take the drops when they felt anxious over a three-day period. There was no difference in effect on anxiety between the Rescue Remedy® and the water and alcohol drops.

Are there any risks?

Bach flower remedies are thought to be safe because they are highly diluted.

Recommendation

There is not enough good evidence to say whether Bach flower remedies work.

Bibliotherapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	👍👍👍
PTSD and ASD	?	Specific phobias	?
Social phobia	👍👍👍	OCD	?

What is it?

Bibliotherapy is a form of self-help that uses books or other written material. The books provide information and homework exercises that the reader works through on their own. Some of the books are based on psychological therapies, such as cognitive behaviour therapy (CBT; see page 24). Self-help books can be bought and read on their own without any contact with a health professional. However, they are also sometimes used as a treatment given by a therapist or GP. This review covers bibliotherapy where there was no contact or minimal contact from a therapist during the treatment period.

How is it meant to work?

Books based on psychological therapies such as CBT work the same way as when the treatment is given by a therapist.

Does it work?

GAD

One good quality study has evaluated bibliotherapy for GAD. Adults with GAD worked through a self-help booklet for four weeks or received no treatment. The booklet taught problem solving techniques and had 28 worksheets. Participants received short phone calls during the study where they could ask questions about the treatment. The study found that the bibliotherapy treatment was more effective than no treatment. Improvements from the booklet also lasted for at least three months.

PTSD and ASD

One good quality study has looked at bibliotherapy for PTSD. Adults who had recently had a car accident received three months of CBT, a self-help booklet based on CBT (*Understanding your reactions to trauma*) or no treatment. Participants had no contact with therapists after receiving the booklet. The study showed that therapy was better than the booklet, and that the booklet was no better than no treatment.

Social phobia

Four studies have been carried out on bibliotherapy for social phobia. Three studies involved no contact with therapists during treatment. One study included regular meetings with a therapist where participants could ask questions about the treatment. Overall, these studies show that bibliotherapy is more effective than no treatment and may be as effective as face-to-face therapy. Books used in these studies include *The shyness and social anxiety workbook* and *Overcoming shyness and social phobia*.

Panic disorder and agoraphobia

Ten studies have been carried out on bibliotherapy for panic disorder. The majority of these studies involved some minor contact from therapists during the study. Overall, these studies show that bibliotherapy is more effective than no treatment but less effective than face-to-face therapy. Books used in these studies include *Living with fear*, *Coping with panic*, and *Mastery of your anxiety and panic*.

Specific phobias

Two studies have evaluated bibliotherapy for specific phobias. These compared bibliotherapy with one session of behaviour therapy (exposure) delivered by a therapist. One study involved minor contact with a therapist and one did not. Both studies showed that bibliotherapy was less effective than face-to-face therapy. There is no evidence on whether it is more helpful than no treatment.

OCD

One study has been carried out of the self-help book, *Stop obsessing!* Adults with OCD who had not improved with previous medication worked through the book for six weeks or received equivalent psychological therapy from a therapist. Participants who received the book had no further contact with therapists during the study. Both groups improved, however the face-to-face therapy was more effective than the book.

Three studies have tested the effectiveness of three different self-help manuals that were emailed to participants. After four weeks, two of these manuals improved OCD symptoms more than no treatment, but one was not helpful. These results are promising, however further study is needed to confirm the effectiveness of the manuals.

Are there any risks?

Readers should be wary of books that claim to be easy cures or that are not based on effective therapies such as CBT. In addition, readers could feel worse if they do not apply the treatment correctly or give up early.

Recommendation

Bibliotherapy is effective for panic disorder and social phobia. However, it is generally not as effective as face-to-face therapy. There is not enough evidence to say whether it is effective for GAD, OCD, specific phobias and PTSD.

Black cohosh

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Black cohosh (*Cimicifuga racemosa*) is a plant native to North America. Plant extracts are available as supplements.

How is it meant to work?

Black cohosh is usually used as a complementary treatment for menopausal symptoms (e.g. hot flushes). How it works for anxiety is not clear.

Does it work?

GAD

One study has been carried out in women with GAD due to menopause. Twenty-eight women took either black cohosh or a placebo pill for 12 weeks. The dose of black cohosh varied up to 128mg per day. Black cohosh did not appear to benefit anxiety symptoms.

Other types of anxiety

There is no evidence on whether black cohosh works for GAD unrelated to menopause, or for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Use of black cohosh has been linked with liver damage. This risk appears to be very low, however. The Therapeutic Goods Administration (TGA) recommends that black cohosh should only be taken under the supervision of a doctor.

Recommendation

More research is needed to say whether black cohosh works.

Breathing training

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Breathing training teaches correct breathing habits to people with anxiety. It is also known as 'breathing retraining'. It is mainly used to treat panic attacks.

How is it meant to work?

People with anxiety are thought to have abnormal breathing patterns. They may breathe faster and deeper than necessary and have high levels of carbon dioxide in the blood. This may increase anxiety. As breathing training helps to correct these breathing habits it may also help to reduce anxiety. Breathing training may also help people feel as if they have more control of their anxiety. Breathing training can be used by itself or in combination with other treatments.

Does it work?

Panic disorder and agoraphobia

Several studies have looked at the effect of breathing training in panic disorder. The studies that looked at breathing training alone did show some benefit. However, these studies did not use control (no-treatment) groups and it is not possible to draw conclusions. Some other studies have compared breathing training with other psychological treatments. The better quality studies suggested that breathing training was not as effective as psychological treatments such as CBT.

Other types of anxiety

There is no evidence on whether breathing training works for GAD, PTSD, social phobia, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether breathing training is effective in treating anxiety.

Caffeine consumption

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

What is it?

Caffeine is a nervous system stimulant. It can be found in coffee, tea, cola and chocolate.

How is it meant to work?

Consuming large amounts of caffeine can cause similar symptoms to anxiety (e.g. restlessness, nervousness). Caffeine consumption may cause anxiety because it blocks the action of a substance in the brain that calms down the body. By contrast, caffeine might help OCD by increasing the level of the chemical messenger dopamine in the brain.

Does it work?

OCD

One study compared the effectiveness of an amphetamine (see stimulants, page 68) with caffeine in 24 adults with OCD. These treatments were taken in addition to antidepressant medication. Participants took either a large dose of 300mg caffeine or 30mg amphetamines daily. The caffeine was not expected to be helpful. However, after one week, both treatments were helpful for about half of the participants. These improvements lasted for a further four weeks. These results need to be confirmed in further studies.

Other types of anxiety

Several studies have shown that consuming large doses of caffeine after a caffeine-free period briefly increases anxiety in those with panic disorder, GAD or social phobia. There is no evidence on whether caffeine is helpful for PTSD or specific phobias.

Are there any risks?

In rare cases caffeine consumption has caused mania and psychosis symptoms.

Recommendation

There is not enough good evidence to say whether consuming caffeine works for OCD. Large doses are not recommended for panic disorder, GAD or social phobia.

Caffeine reduction or avoidance

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Caffeine is a nervous system stimulant. It can be found in coffee, tea, cola and chocolate.

How is it meant to work?

Caffeine may cause anxiety because it blocks the action of a substance in the brain that calms the body down. Consuming large amounts of caffeine can cause similar symptoms to anxiety (e.g. restlessness, nervousness). Hence, reducing or going without caffeine could be helpful for those with anxiety.

Does it work?

Reducing caffeine has not been properly evaluated in well-designed studies. There are only reports of treatments with a single person (case studies) with panic disorder, GAD or social phobia, in which reducing caffeine has lowered anxiety levels.

There is no evidence on whether caffeine reduction or avoidance works for PTSD, specific phobias or OCD.

Are there any risks?

Symptoms of caffeine withdrawal include headache, fatigue, decreased energy and alertness, depressed mood, problems concentrating and feeling irritable. These symptoms may last for two to nine days.

Recommendation

There is not enough good evidence to say whether reducing or avoiding caffeine works.

Chamomile

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Chamomile (*Matricaria recutita*) is a herb. In traditional herbal medicine it is thought to have a calming and relaxing effect.

How is it meant to work?

This is unclear. Some of its chemical components may affect parts of the brain related to anxiety, stress and mood.

Does it work?

GAD

One small study has been carried out on 57 adults with GAD. Adults received daily doses of chamomile extract (220mg to 1100mg) or placebo pills for eight weeks. Chamomile reduced anxiety more than the placebo.

Other types of anxiety

There is no evidence on whether chamomile works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Few side-effects were reported in the above study. It should be noted that the benefits were found for this particular type of chamomile extract. It is also possible that taking chamomile in other forms (e.g. oil, vapour and tea) may have produced different effects.

Recommendation

While there is some initial positive evidence, more studies are needed to say whether chamomile works for GAD.

Energy psychology (aka meridian tapping)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	👍 👍 👍
Social phobia	?	OCD	?

What is it?

Energy psychology includes a number of treatments derived from acupuncture and acupressure. It has been called 'acupuncture without needles'. These treatments involve some sort of physical activity, like tapping an acupuncture point, while thinking about something that is a target for change. Particular types of treatment include 'thought field therapy', 'energy tapping', the 'tapas acupressure technique' and 'emotional freedom techniques'.

How is it meant to work?

Energy psychology is based on the idea that mental health problems are related to disturbances in the body's electrical energies. The treatments help correct these disturbances. Because they involve thinking about something that is a target for change, these treatments also involve a component of exposure therapy (see page 21).

Does it work?

PTSD and ASD

Two studies have been carried out on treatment of PTSD. The first involved 50 men who were receiving group cognitive behaviour therapy (CBT). Half of them also received thought field therapy over three months and the rest did not. No difference was found. The second study involved 46 people who received either emotional freedom techniques or eye movement desensitization and reprocessing (EMDR – see page 28) for up to eight sessions. Both treatments improved symptoms with no difference between them.

Specific phobias

Two studies have been carried out on specific phobias. The first study compared emotional freedom techniques with diaphragmatic breathing in 35 people with phobias of small animals. After a single session, the group receiving emotional freedom techniques improved more and this benefit lasted for six to nine months following treatment. Similar effects were found in another study with 22 people who had a variety of phobias. Again the emotional freedom techniques were more effective than diaphragmatic breathing.

OCD

One study has compared meridian tapping with relaxation training. Seventy people with OCD were recruited over the internet. Half of them were sent written instructions and videos on how to treat themselves with meridian tapping. The other half received written instructions on how to do muscle relaxation. Neither treatment produced any improvement.

Other types of anxiety

There is no evidence on whether energy psychology methods work for GAD, social phobia or panic disorder.

Are there any risks?

None are reported.

Recommendation

There is some evidence supporting energy psychology treatments for specific phobias. More evidence is needed to know whether they work for other types of anxiety.

Exercise

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

The two main types of exercise are aerobic (exercises the heart and lungs, such as in jogging) or anaerobic (strengthens muscles, such as in weight training).

How is it meant to work?

This is unclear, but it can be helpful for mild anxiety in people without anxiety disorders. It may work by changing brain chemistry, improving sleep, improving coping ability or as a distraction from worries. Exercise can cause physical symptoms similar to panic attacks (e.g. shortness of breath). This can be helpful for panic disorder because the symptoms are experienced in a controlled way.

Does it work?

One study was carried out in 74 people with GAD, panic disorder or social phobia. All participants received group cognitive behaviour therapy for eight to 10 weeks (CBT; see page 24). In addition, half were given pedometers and encouraged to walk at home for 150 minutes per week. The other half attended information sessions on healthy eating. Treatment improved anxiety overall. The addition of exercise led to a greater improvement, particularly for social phobia. However, results were not available for nearly half of the participants.

GAD

One small study has evaluated exercise training in women with GAD. This study compared six weeks of supervised aerobic exercise or anaerobic exercise with no treatment. Exercise sessions were twice a week. Time spent exercising in each session was about 15 minutes at a moderate intensity. Both kinds of exercise were more effective than no treatment in reducing anxiety. The anaerobic exercise also seemed to be more effective than the aerobic exercise.

PTSD and ASD

Three small poor quality studies have evaluated aerobic exercise for PTSD. Two studies were in adolescents and one was in adults. All three found exercise was beneficial for PTSD. None of the studies had a comparison group that received no treatment, so it is hard to draw conclusions.

Social phobia

One study compared aerobic exercise with mindfulness-based stress reduction (MBSR – see page 34) in 56 adults with social phobia. Half received training in MBSR for eight weeks. The other half completed three exercise sessions at a gym each week for eight weeks. Both treatments improved social phobia symptoms. Symptoms were still reduced three months after the end of treatment.

Panic disorder and agoraphobia

Two good quality studies have been carried out of exercise for panic disorder. One compared 10 weeks of regular aerobic exercise (running) with an antidepressant drug or placebo (dummy pills) in 46 adults with panic disorder. Exercise was more effective than placebo, but less effective than the drug. The second compared aerobic exercise with autogenic training (see page 75) in 75 adults. Treatments were for 10 weeks. Both treatments improved panic symptoms a similar amount. However, there was no comparison with a group that did not receive treatment.

OCD

One small study reported improvements in OCD symptoms after an aerobic exercise program. However, a third of participants found the exercise too hard and stopped treatment. Another small study found that adding a 12-week aerobic exercise program to treatment with drugs or therapy improved OCD symptoms. Neither of these studies had a comparison group, so it is hard to draw conclusions.

Other types of anxiety

There is no evidence on whether exercise works for specific phobias.

Are there any risks?

There is a risk of injury when exercising. Anyone considering a major change in exercise patterns is advised to consult their doctor.

Recommendation

Many of the studies of exercise for anxiety have been of poor quality. It appears it may be helpful (especially for panic disorder), but better quality studies are needed to be sure.

Foods rich in tryptophan

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Tryptophan is a building block of protein. Foods rich in tryptophan are protein-based foods such as meat and dairy.

How is it meant to work?

Tryptophan is a building block of serotonin, a brain chemical that has a role in reducing anxiety. It is thought that one way of increasing levels of tryptophan in the brain is to consume foods rich in tryptophan along with high glycemic index (GI) carbohydrates.

Does it work?

Social phobia

One small study has evaluated de-oiled pumpkin seed (a rich source of tryptophan) as a treatment for social phobia. Adults consumed one of two bars and then completed an anxiety-producing task. One bar contained pumpkin seed and sugar, and the other contained the same amount of sugar but no pumpkin seed. Results showed some benefit of the pumpkin seed bar, but results were not conclusive.

Other types of anxiety

There is no evidence on whether foods rich in tryptophan work for GAD, PTSD, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether foods rich in tryptophan work for anxiety.

Ginkgo

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Extracts of the leaves of the ginkgo tree (*Ginkgo biloba*) are available as a supplement.

How is it meant to work?

This is not understood. It is thought it may play a role in suppressing the body's response to stress.

Does it work?

GAD

One study has been carried out in 107 adults with GAD or other anxiety problems. They took daily doses of 480mg ginkgo, 240mg ginkgo or placebo (dummy pills) for four weeks. Ginkgo improved anxiety more than placebo and the higher dose of ginkgo was better than the lower dose.

Other types of anxiety

There is no evidence on whether ginkgo works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None were found in the study above.

Recommendation

There is not enough good evidence to say whether ginkgo works.

Glycine

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Glycine is an amino acid, one of the building blocks of protein. It is created in the body but can also be taken as a supplement.

How is it meant to work?

This is unclear. It might work by acting on chemicals in the brain (neurotransmitters).

Does it work?

OCD

One small study compared a large dose of glycine with placebo powder. Twenty-four adults consumed a daily dose of up to 60g glycine powder or placebo powder dissolved in liquid for 12 weeks. Glycine seemed to improve OCD symptoms more than placebo, but the study was too small to be sure. Many participants stopped taking glycine because they felt nauseous or did not like the taste.

Other types of anxiety

There is no evidence on whether glycine works for GAD, PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

Large doses of glycine may cause nausea.

Recommendation

There is not enough evidence to say whether glycine works.

Golden Root

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Golden Root *(Rhodiola rosea)* is a plant that grows in cold regions of the world, such as the Arctic and high mountains. In some parts of the world, it has been used as a traditional remedy to cope with stress. Extracts of the plant have been marketed under the brand 'Arctic Root'.

How is it meant to work?

This is a traditional remedy that is supposed to increase the body's resistance to stress. However, the mechanism by which it might work is not understood.

Does it work?

GAD

One study looked at the effects of Golden Root in 10 people with GAD. They were given a daily dose of 340mg for 10 weeks. After this time their anxiety symptoms were reduced. However, the study was small and there was no comparison with placebos (dummy pills).

Other types of anxiety

There is no evidence on whether Golden Root works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

The study above reported only mild side-effects including dizziness and dry mouth.

Recommendation

There is not enough evidence to say whether Golden Root works for anxiety.

Gotu kola

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Gotu kola (*Centella asiatica*) is a plant found in India, Asia, and the Middle East.

How is it meant to work?

Gotu kola is used in Ayurvedic medicine (see page 77). It is thought to help protect against stress.

Does it work?

GAD

One small study gave extracts of Gotu kola to 33 adults with GAD. A dose of 500mg twice a day was taken for two months. The treatment improved anxiety symptoms, but there was no comparison group.

Other types of anxiety

There is no evidence on whether Gotu kola works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

No side-effects were reported in the above study.

Recommendation

There is not enough evidence to say whether or not Gotu kola works.

Holy basil

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Holy basil (*Ocimum sanctum* or *Ocimum tenuiflorum*, also known as Tulsi) is a plant native to tropical Asia. It is not the same as sweet basil (*Ocimum basilicum*). Teas made from the plant are available to buy.

How is it meant to work?

Holy basil is used traditionally in ancient Indian medicine. It is thought to help people adapt to stress.

Does it work?

GAD

One small study has evaluated holy basil for GAD. An alcohol extract of 1,000mg holy basil leaves per day was given to 35 adults for two months. Results showed anxiety levels improved overall, but there was no comparison group.

Other types of anxiety

There is no evidence on whether holy basil works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether holy basil works.

Homeopathy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Homeopathy uses very small doses of various substances to stimulate self-healing. Substances are selected that produce, in a healthy person, symptoms similar to those of the illness when used undiluted. Treatments are also based on the person's symptoms rather than their diagnosis. This means that two people with the same illness may receive different treatments. Treatments are prepared by diluting substances with water or alcohol and shaking. This process is then repeated many times until there is little or none of the substance left. Homeopathic treatments are available by visiting a practitioner or buying over the counter.

How is it meant to work?

Homeopathy is based on the principle of 'like cures like'. The diluting and shaking process is thought to remove any harmful effects of the substance, while the water retains the memory of the substance.

Does it work?

GAD

Two studies have been done in adults with GAD. In one study, adults received a homeopathic treatment for their specific symptoms or a placebo (dummy pill). After 10 weeks, anxiety symptoms improved in both groups, with no difference between them.

Another small study compared homeopathy with cognitive behaviour therapy (CBT; see page 24). Participants received one of three treatments. These were homeopathy, three sessions of CBT plus a placebo or a placebo only. After four weeks, anxiety had improved in all groups with no difference between them.

Other types of anxiety

There is no evidence on whether homeopathy works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Negative reactions are usually quite rare, mild and short-lived. Examples are a short-lived worsening of symptoms and reappearance of old symptoms.

Recommendation

There is not enough good evidence to say whether homeopathy works for anxiety.

Inositol

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Inositol is a compound similar to glucose. The average adult consumes about 1g daily through diet. Supplements are also available at health food shops.

How is it meant to work?

This is unclear, however it may be because inositol helps produce substances that send signals within brain cells.

Does it work?

PTSD and ASD

One small study has evaluated inositol for PTSD. Daily doses of 12g inositol or placebo (dummy pills) were given to 12 adults for four weeks. Inositol was not more helpful than placebo.

Panic disorder and agoraphobia

One small study found daily doses of 12g inositol better than placebo (dummy pills) over four weeks. Another small study compared inositol with an antidepressant (see page 50). It found inositol was as helpful as the drug after one month.

OCD

Inositol has been tested for OCD in a study with 13 adults. Daily doses of 18g over six weeks were better than placebo (dummy pills) in reducing OCD symptoms. A different study found it did not improve OCD symptoms when taken in addition to antidepressant drugs.

Other types of anxiety

There is no evidence on whether inositol works for GAD, social phobia or specific phobias.

Are there any risks?

Daily doses of 12g or more may cause mild nausea and diarrhoea.

Recommendation

Few good studies have been carried out on inositol. More studies are needed to say whether inositol works.

Juggling therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Juggling therapy involves learning to juggle up to three small beanbags with the hands.

How is it meant to work?

It has been proposed that the rapid eye movements involved in juggling contribute to changes in emotional memory processing. It may act in a similar way to eye movement desensitisation and reprocessing (see page 28).

Does it work?

One study was carried out in 17 females with panic disorder, PTSD, OCD or GAD. All participants were treated with medication and psychological therapies for six months. In addition, half were taught juggling skills for three months. Anxiety symptoms improved more in the juggling group.

Other types of anxiety

There is no evidence on whether juggling therapy works for social phobia, panic disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether or not juggling therapy works.

Kampo

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Kampo is Japanese herbal therapy. It was developed from traditional Chinese medicine. Kampo medicines contain combinations of herbs, fungi, minerals and insects.

How is it meant to work?

Kampo medicines are a traditional treatment. Treatments are derived from over a thousand years of use in Japan.

Does it work?

Panic disorder and agoraphobia

There are five reports of cases where kampo medicines were used successfully in adults with panic disorder. However, no scientific study has been carried out with an untreated comparison group.

Other types of anxiety

There is no evidence on whether kampo works for GAD, PTSD, social phobia, specific phobias or OCD.

Are there any risks?

A case has been reported where a kampo herbal treatment, kamishoyosan, caused liver damage.

Recommendation

There is not enough good evidence to say whether kampo works or not.

Kava

Evidence rating

GAD	👍👍👍	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

⚠ Kava has been banned in some countries because it may cause liver damage in some people.

What is it?

Kava (*Piper methysticum*) is a herb from the South Pacific. It has been used as a social drink and in ceremonial rituals for hundreds of years. Because of safety concerns, kava is a prohibited import in Australia except under very specific conditions.

How is it meant to work?

Chemicals from the root are thought to affect brain chemistry.

Does it work?

GAD

A number of studies have compared kava with a placebo (dummy pill) for the treatment of generalised anxiety. Pooling the results from these studies showed that kava was more effective than placebo.

Other types of anxiety

There is no evidence on whether kava works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Kava use may be linked with liver damage. Frequent use of kava at high doses also causes a skin rash. It should not be used with alcohol or benzodiazepines.

Recommendation

Kava appears to be helpful for GAD. However, it cannot be recommended because of concerns about its safety.

Lavender

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Lavender (*Lavandula angustifolia*) is a shrub. The oil from the plant has been used as a folk remedy for a range of illnesses.

How is it meant to work?

This is not known. Lavender oil contains a number of chemicals which might affect the brain.

Does it work?

GAD

A study has been carried out with a lavender preparation called Silexan. Silexan was compared with a benzodiazepine (see page 57) in 77 people over six weeks. Equal improvement was found with both treatments. However, the study did not include a group receiving a placebo (dummy pill).

Other types of anxiety

There is no evidence on whether lavender works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

In the above study, some people reported gastrointestinal side-effects.

Recommendation

More evidence is needed to say whether or not lavender works.

Massage

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Massage involves the manipulation of soft body tissues using the hands or a mechanical device. Massage is often done by a trained professional. One of the aims of massage is to relieve tension in the body.

How is it meant to work?

This is not known. However, it is possible that massage reduces stress hormones or reduces the body's physiological arousal.

Does it work?

GAD

A small study on adults with GAD found that massage reduced anxiety on the day of the massage. However, longer-term effects were not found. Another study with 68 people gave them either massages, heat packs on various parts of the body or had them listen to music while lying on a massage table. Everyone was also instructed in use of deep breathing. These treatments were given for 10 sessions over 12 weeks. All treatments led to similar improvements. This suggests that it was having a relaxing time that was important, rather than massage specifically.

PTSD and ASD

One study of children with severe PTSD gave regular massages over a month. These children were compared to a group that watched fun videos while sitting on an adult's lap for the same amount of time. The children given massages had greater reduction in anxiety than the comparison group.

Other types of anxiety

There is no evidence on whether massage works for social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether massage works for anxiety.

Meditation

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

There are many different types of meditation. However, they all train a person to focus their attention and awareness. Some types of meditation involve focusing attention on a silently repeated word or on the breath. An example is transcendental meditation. Others involve observing thoughts without judgment. An example is mindfulness meditation or vipassana. Although meditation is often done for spiritual or religious reasons, this is not always the case. Some meditation methods have been used within Western psychological treatments. These include mindfulness-based stress reduction and mindfulness-based cognitive therapy. The research on these treatments is reviewed under Mindfulness-based therapies on page 34.

How is it meant to work?

Meditation may reduce anxiety by aiding relaxation. Also, mindfulness meditation might help a person to distance themselves from negative thoughts.

Does it work?

PTSD and ASD

A study has been carried out with children with PTSD following a natural disaster. There were 31 children who received either meditation-relaxation or narrative exposure therapy (see page 36). Both groups improved equally. However, there was no comparison group which did not receive treatment. There have also been two small studies with combat veterans with PTSD. One study used mindfulness meditation and the other transcendental meditation. While improvements were found, there were no comparison groups receiving either no treatment or other treatments.

GAD

There have been two studies. One involved 31 adults who received either transcendental meditation, muscle biofeedback or relaxation therapy over six weeks. All treatment groups improved, with no difference between them. However, the study did not have a comparison group receiving no treatment. The other study involved 46 people with either GAD or panic disorder. Meditation combined with exercise, relaxation and hypnosis over eight weeks was found to be more effective than education about anxiety. However, it is unclear whether meditation or other components led to the benefit.

Panic disorder and agoraphobia

See section above on GAD.

OCD

There has been one small study of 21 people comparing a combination of relaxation training and mindfulness meditation with Kundalini Yoga meditation. No difference was found between the groups after three months. However, this study did not have a comparison group receiving no treatment.

Other types of anxiety

There is no evidence on whether meditation works for social phobia or specific phobias.

Are there any risks?

In rare cases, meditation can bring on a psychotic state. Caution is needed in people who have had a psychotic disorder.

Recommendation

There is not enough good evidence to say whether or not meditation works.

Milk thistle

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Milk thistle (*Silybum marianum*) is a medicinal plant native to Mediterranean regions.

How is it meant to work?

Milk thistle contains a substance that might increase the level of certain neurotransmitters (chemical messengers) in the brain that are thought to be affected in anxiety.

Does it work?

OCD

One small study has been carried out with 35 adults with OCD. Adults received daily doses of either milk thistle extract (600mg) or an antidepressant for eight weeks. Both groups improved, with no difference between them. However, the study may have been too small to find a difference and there was no placebo (dummy pill) group.

Other types of anxiety

There is no evidence on whether milk thistle works for GAD, PTSD, social phobia, panic disorder, or specific phobias.

Are there any risks?

Side-effects were uncommon in the above study and similar for milk thistle and an antidepressant.

Recommendation

There is not enough evidence to say whether milk thistle is effective for depression.

N-acetylcysteine (NAC)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

N-acetylcysteine (NAC) is a chemical which acts as an antioxidant in the body. Antioxidants mop up destructive molecules called 'free radicals'. It is available as a supplement.

How is it meant to work?

As well as being an antioxidant, NAC affects levels of some neurotransmitters (chemical messengers) in the brain.

Does it work?

OCD

One case study has used NAC in a person with long-standing OCD which did not respond to other treatments. Adding 3g per day of NAC to an antidepressant led to improvement.

Other types of anxiety

There is no evidence on whether NAC works for GAD, PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

Side-effects are minimal.

Recommendation

There is not enough evidence to say whether NAC works for anxiety.

Omega-3 fatty acids (fish oil)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Omega-3 fatty acids are types of polyunsaturated fats. The two main types are eicosapentanoic acid (EPA) and docosahexanoic acid (DHA). EPA and DHA are found in fish oil or can be made in the body from the oil found in foods like flaxseed, walnuts and canola oil. Omega-3 supplements containing EPA and DHA are available from health food shops and pharmacies.

How is it meant to work?

This is not known. One possibility is that omega-3 affects the outer wall of brain cells, making it easier to send messages between and within brain cells.

Does it work?

PTSD and ASD

A small study of omega-3 has been carried out in six people with PTSD. There was no improvement and three of the participants in fact got worse. However, there was not a comparison group which did not receive treatment.

OCD

One small study has compared omega-3 with placebo (paraffin oil) in people who were also taking antidepressants. No difference in improvement was found.

Other types of anxiety

There is no evidence on whether omega-3 fatty acids work for GAD, social phobia, panic disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether omega-3 works.

Painkillers

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Painkillers are sold over-the-counter without prescription for the temporary relief of pain. They include aspirin, paracetamol and ibuprofen. Some people use these painkillers to help with anxiety and depression.

How is it meant to work?

This is unclear. It is thought that proteins produced during inflammation may play a role in anxiety. Some painkillers act to reduce inflammation.

Does it work?

Panic disorder and agoraphobia

One study with 32 people compared ibuprofen with an anti-anxiety drug. The group given ibuprofen did not improve as much as those on the anti-anxiety drug. However, there was no comparison group given a placebo (dummy pill).

Other types of anxiety

There is no evidence on whether painkillers work for GAD, PTSD, social phobia, OCD or specific phobias.

Are there any risks?

Over-the-counter painkillers are not meant to be treatments for anxiety. There is always a risk in using medications for purposes they were not designed for.

Recommendation

There is not enough evidence to say whether or not various types of painkillers help anxiety.

Passionflower

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Passionflower (*Passiflora incarnata*) is a plant native to the Americas. It is used as a traditional remedy for anxiety and insomnia.

How is it meant to work?

This is not understood.

Does it work?

GAD

Two studies have compared passionflower with benzodiazepines (see page 57) over a four-week period. Both studies found equal improvement with both treatments. However, there was no comparison group receiving placebos (dummy pills).

Other types of anxiety

There is no evidence on whether passionflower works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

There has been a report that passionflower caused heart abnormalities, nausea and drowsiness.

Recommendation

There is not enough good evidence to say whether passionflower works for anxiety.

Relaxation training

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD and ASD		Specific phobias	
Social phobia		OCD	

What is it?

There are a number of different types of relaxation training. The most common one is progressive muscle relaxation. This teaches a person to relax by tensing and relaxing specific groups of muscles. Another type of relaxation training involves thinking of relaxing scenes or places. Relaxation training can be learned from a professional or done as self-help. Recorded instructions are available for free on the internet. They can also be bought as CDs.

How is it meant to work?

People with anxiety are thought to have tense muscles. As relaxation training helps to relax muscles, it may also help to reduce anxious thoughts and behaviours. Relaxation training may also help people feel as if they have more control of their anxiety.

Does it work?

GAD

Researchers have pooled together the results of studies on relaxation training with GAD to get a clearer idea of the effects. Relaxation training has been shown to be better than no treatment. Some studies have shown it to be as effective as psychological therapies, mainly cognitive behaviour therapy (CBT; see page 24), although others have not.

PTSD and ASD

Seven studies have looked at the effects of relaxation training on PTSD. These showed that relaxation training is better than no treatment. However, it is less effective than psychological therapies, including CBT and exposure therapy (see page 24).

Social phobia

Four studies have compared relaxation with other treatments for social phobia. Relaxation training was shown to be better than no treatment. It was also shown to be less effective than psychological therapies, including CBT (see page 24).

Panic disorder and agoraphobia

Pooling together the results of studies on relaxation and panic disorder showed that relaxation training was better than no treatment. Results also showed relaxation training to be as effective as drug treatments and psychological therapies, including CBT.

Specific phobias

Relaxation training has been studied as a treatment for different phobias. It is as effective as other behavioural and drug treatments for dental phobia and test anxiety. It is less effective than other behavioural treatments for snake and spider phobias.

OCD

Six studies have compared relaxation training with different types of psychological therapy (see page 39) in people with OCD. It was not found to be as effective as these in any of the studies.

Are there any risks?

None are known.

Recommendation

Relaxation training appears to be better than no treatment for GAD, panic disorder, PTSD and social phobia and some specific phobias. It is not as effective as psychological therapies for PTSD, social phobia and OCD.

Smoking cigarettes

Evidence rating

GAD	?	Panic disorder and agoraphobia	👎
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

Smoking is a major risk factor for a range of chronic physical diseases, including stroke, heart disease and cancer. These physical diseases increase risk for anxiety. Smoking can also increase the risk of panic attacks.

What is it?

People with anxiety are more likely to smoke cigarettes, with OCD being an exception. One explanation for this is that they smoke to relieve symptoms of anxiety.

How is it meant to work?

The nicotine in cigarettes might have an anti-anxiety effect. Nicotine affects the levels of several neurotransmitters (chemical messengers) involved in anxiety.

Does it work?

PTSD and ASD

One study looked at anxiety in people with PTSD when they were listening to a description of a traumatic event. Smoking was found to reduce subjective feelings of anxiety, but at the same time it increased the physical signs of anxiety. Another study found that people with PTSD had a greater startle response (a physical sign of anxiety) to a loud noise and that smoking increased their startle response.

Panic disorder and agoraphobia

Rather than helping panic disorder and agoraphobia, smoking seems to increase vulnerability to panic. A number of studies have found that smokers actually have an increased risk of panic disorder.

Specific phobias

A study of women with rat phobia found that smoking did not reduce anxiety when they were near a rat.

Other types of anxiety

There is no evidence on whether smoking cigarettes works for GAD, social phobia or OCD.

Are there any risks?

Smoking can increase risk for some types of anxiety, in particular panic disorder. Smoking is also a major risk factor for a range of chronic physical diseases, including stroke, heart disease and cancer. These physical diseases increase risk for anxiety.

Recommendation

There is no good evidence that smoking helps anxiety and there is some evidence it might increase the risk of panic attacks as well as a range of health problems.

St John's wort

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

St John's wort interacts with a number of prescription medications (see below), either affecting how these medications work or leading to serious side-effects. People who are taking other medications should check with their doctor first before using St John's wort.

What is it?

St John's wort (*Hypericum perforatum*) is a small flowering plant which has been used as a traditional herbal remedy for depression. The plant gets its name because it flowers around the feast day of St John the Baptist. In Australia, St John's wort extracts are widely available in health food shops and supermarkets. However, in some other countries St John's wort extracts are available only with a prescription.

How is it meant to work?

The most important active compounds in St John's wort are believed to be hypericin and hyperforin, but other compounds may also play a role. How it works is not entirely clear. However, it might increase the supply of certain neurotransmitters (chemical messengers) in the brain that are thought to be affected in anxiety. These are serotonin, norepinephrine and dopamine.

Does it work?

GAD

There have been six case reports of St John's wort successfully treating GAD. However, no scientific studies have been carried out.

Social phobia

One study has been carried out in 40 adults with social phobia. One group took St John's wort twice a day and one group took placebo (dummy pills). The minimum daily dose was 600mg St John's wort and each person could increase the dose up to 1800mg if they wanted to. The study lasted for 12 weeks. St John's wort did not have any effect on the symptoms of social phobia.

OCD

A similar study was carried out in 60 adults with OCD. One group took St John's wort twice a day and one group took placebo (dummy pills). The minimum daily dose was 600mg St John's wort and each person could increase the dose up to 1800mg if they wanted to. The study lasted for 12 weeks. St John's wort did not have any effect on the symptoms of OCD.

Other types of anxiety

There is no evidence on whether St John's wort works for PTSD, panic disorder or specific phobias.

Are there any risks?

When taken alone, St John's wort has very few side-effects. However, St John's wort interacts with many prescription medications, either affecting how these medications work or producing serious side-effects. The Therapeutic Goods Administration (TGA) says people taking any of the following medications should not start using St John's wort:

- SSRI antidepressants and related drugs (citalopram, fluoxetine, fluvoxamine, paroxetine, sertraline, nefazodone)
- HIV protease inhibitors (indinavir, nelfinavir, ritonavir, saquinavir)

- HIV non-nucleoside reverse transcriptase inhibitors (efavirenz, nevirapine, delavirdine)
- Cyclosporin, tacrolimus
- Warfarin
- Digoxin
- Theophylline
- Anti-convulsants (carbamazepine, phenobarbitone, phenytoin)
- Oral contraceptives
- Triptans (sumatriptan, naratriptan, rizatriptan, zolmitriptan).

Anyone who is taking any other medications and wishes to use St John's wort is advised to check with their doctor first.

Recommendation

Initial evidence suggests that St John's wort does not appear to be effective for OCD or social phobia. However more research is needed. There is no evidence on whether St John's wort works for PTSD, panic disorder or specific phobias.

Sympathyl

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Sympathyl is a herbal medicine made in France. It contains California poppy (*Escholtzia californica*), hawthorn (*Crataegus oxyacantha*) and magnesium.

How is it meant to work?

This is not understood. Hawthorn and California poppy are thought to have anti-anxiety properties. Magnesium deficiency can cause psychological problems.

Does it work?

GAD

One study has been carried out in 264 adults with GAD. One group took two Sympathyl tablets twice a day and one group took placebo (dummy pills) for three months. Each tablet contained 75mg hawthorn, 20mg California poppy and 75mg magnesium. More people in the Sympathyl group responded to treatment and people in the Sympathyl group also had lower symptoms of anxiety overall.

Other types of anxiety

There is no evidence on whether Sympathyl works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None were found in the study above.

Recommendation

While there is some initial positive evidence, more studies are needed to say whether Sympathyl works for anxiety.

Valerian

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Valerian (*Valeriana officinalis*) is a herb. It is often used to treat sleeping difficulties and is also used for treating anxiety.

How is it meant to work?

This is not well understood. It is thought that valerian might act like the benzodiazepine diazepam (see page 57).

Does it work?

GAD

One study has been carried out in 36 adults with GAD. The study compared the effects of valerian, a benzodiazepine (see page 57) and placebo (dummy pill). The results showed no difference between valerian and placebo. There was also no difference between valerian and the benzodiazepine when the anxiety symptoms were rated by a doctor. When the people in the study rated their own symptoms, more benefit was found with the benzodiazepine.

Other types of anxiety

There is no evidence on whether valerian works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Valerian is generally recognised as safe.

Recommendation

There is not enough good evidence to say whether valerian works for anxiety.

Vitamin supplements

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Vitamins are nutrients essential to life. While food is the main source, supplements can be used as well.

How is it meant to work?

Some individuals may have poor diets or genetic defects that affect the body's ability to make neurotransmitters (chemical messengers) in the brain. These problems could be corrected with vitamin supplements.

Does it work?

OCD

There has been one case study reported of a young man with OCD who was given a supplement called EMPowerplus. This consists of multiple vitamins, minerals and amino acids. He improved after eight weeks on the supplement, then got worse when the supplement was removed. However, no scientific studies have been carried out.

Other types of anxiety

There is no evidence on whether vitamin supplements work for GAD, PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

No side-effects were reported in the one case study.

Recommendation

There is not enough evidence to say whether or not vitamin supplements work for anxiety.

Water-based treatments

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Water-based treatments (e.g. hydrotherapy, crenotherapy) are treatments involving water, mud and steam. Different methods of application include spa baths, saunas, mud bandages, water massage, and jet sprays.

How is it meant to work?

Water-based treatments are thought to work because they are relaxing. Mineral-water based treatments might also work by replenishing the body's supply of important elements such as selenium, calcium and copper.

Does it work?

One study has evaluated the effects of spa baths on anxiety. Fourteen adults with a range of types of anxiety each spent 15 minutes in an individual spa bath. Results showed that anxiety was lower after the bath than before the bath. However, the study did not test how long the results lasted.

GAD

One study was carried out in adults with GAD. It compared eight weeks of treatment with spa baths, water massage and spa showers with an antidepressant (see page 50). The study found the spa treatment was better than the drug in reducing anxiety symptoms.

Other types of anxiety

There is no evidence on whether water-based treatments work specifically for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether water-based treatments work for anxiety.

Yoga

Evidence rating

GAD		Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Yoga is an ancient part of Indian culture. Most yoga practised in Western countries is Hatha yoga. This type of yoga exercises the body and mind using physical postures, breathing techniques and meditation.

How is it meant to work?

Yoga is thought to reduce stress and improve relaxation. It may also increase feelings of mastery from learning difficult postures or improve body image from greater bodily awareness and control. It may also help to distract people from negative thoughts.

Does it work?

GAD

Five studies compared yoga with no treatment or other treatments in people with GAD. These used a variety of types of yoga. Overall, the results were positive. Yoga produced more improvement than no treatment. However, the studies were not well-designed, making it difficult to come to firm conclusions.

OCD

One study compared yoga with mindfulness meditation (see page 99) and relaxation in 22 people. Both groups had one-hour weekly treatments with an instructor and did daily practice. After three months the people in the yoga group had lower anxiety symptoms than the people in the mindfulness meditation group.

Other types of anxiety

There is no evidence on whether yoga works for PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

To reduce the risk of injury, yoga should be practised in a class with a qualified instructor.

Recommendation

Yoga may be helpful for GAD, but more good quality research is needed.

New interventions that are not routinely available

Borage

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Borage (*Echium amoenum*) is a herb that grows in Iran. The plant is usually brewed and drunk as tea.

How is it meant to work?

This is not known. Borage is used in traditional Iranian medicine to help with anxiety.

Does it work?

OCD

One study has been carried out in 44 adults with OCD. One group took a daily dose of 500mg of borage extract and the other group took a placebo (dummy pills). After six weeks, the borage group had lower symptoms of OCD than the placebo group.

Other types of anxiety

There is no evidence on whether borage works for GAD, PTSD, social phobia, panic disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

While there is some initial positive evidence, more studies are needed to say whether borage works for OCD.

Cannabidiol

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Cannabidiol is one of the chemicals found in the *cannabis sativa* plant. Cannabidiol pills have only been used in research studies and are not yet available as a treatment.

How is it meant to work?

Cannabidiol affects parts of the brain that control emotions such as fear.

Does it work?

Social phobia

One study has been carried out in 24 people with social phobia. They were given either a cannabidiol pill or a placebo (dummy pill) 90 minutes before speaking to an audience. Those given cannabidiol experienced less anxiety during the speech.

Other types of anxiety

There is no evidence on whether cannabidiol works for GAD, PTSD, panic disorder, specific phobias or OCD.

Are there any risks?

No side-effects have been reported.

Recommendation

Cannabidiol may be a promising treatment for anxiety but more research is needed.

Galphimia glauca

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Galphimia glauca, commonly known as thryallis, is a plant used in Mexican traditional medicine for its relaxing and calming effect.

How is it meant to work?

This is unclear. Its chemical components may affect brain chemistry.

Does it work?

GAD

One study has been carried out in 152 adults with GAD. Adults received daily doses of Galphimia glauca extract (620mg) or benzodiazepine drugs for four weeks. Both treatments reduced anxiety, with no difference between them. However, there was no comparison group that did not receive treatment.

Other types of anxiety

There is no evidence on whether Galphimia glauca works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

Few side-effects were reported in the above study.

Recommendation

There is not enough good evidence to say whether Galphimia glauca works.

Sweet flag

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD and ASD	?	Specific phobias	?
Social phobia	?	OCD	?

What is it?

Sweet flag (Acorus calamus) is a plant used in traditional Indian and Chinese medicine. It may also be known as Vaca, Sweet grass or Calamus. The root of the plant is made into a powder.

How is it meant to work?

Sweet flag is used in Ayurvedic medicine (see page 77). It is thought to help protect against stress.

Does it work?

GAD

One small study gave extracts of Sweet flag to 40 adults with GAD. A dose of 500mg twice a day was taken for two months. The treatment improved anxiety symptoms, but there was no comparison group.

Other types of anxiety

There is no evidence on whether Sweet flag works for PTSD, social phobia, panic disorder, specific phobias or OCD.

Are there any risks?

No side-effects were found in the above study.

Recommendation

There is not enough evidence to say whether or not Sweet flag works for anxiety.

Interventions reviewed but where no evidence was found

American ginseng (*Panax quinquefolius*)

Astragalus (*Astragalus membranaceous*)

Barley avoidance

Berocca

Biotin

Brahmi (*Bacopa monniera*)

California poppy (*Eschscholzia californica*)

Catnip (*Nepeta cataria*)

Cat's claw (*Uncaria tomentosa*)

Chaste tree berry (*Vitex agnus castus*)

Chinese medicinal mushrooms (reishi or Lingzhi) (*Ganoderma lucidum*)

Choline

Chromium

Coenzyme Q10

Cowslip (*Primula veris*)

Craniosacral therapy

Dairy food avoidance

Damiana (*Turnera diffusa*)

Dandelion (*Taraxacum officinale*)

Flax seeds (linseed) (*Linum usitatissimum*)

Gamma-aminobutyric acid (GABA)

Ginger (*Zingiber officinale*)

Ginseng (*Panax ginseng*)

Glutamine

Hawthorn (*Crataegus laevigata*)

Hops (*Humulus lupulus*)

Humour

Hyssop (*Hyssopus officinalis*)

Ketogenic diet

L-arginine

Lecithin

Lemon balm (*Melissa officinalis*)

Lemongrass leaves (*Cymbopogon citrates*)

Licorice (*Glycyrrhiza glabra*)

L-lysine

Magnesium

Marijuana

Melatonin

Mistletoe (*Viscum album*)

Motherwort (*Leonurus cardiaca*)

Music

Narrative therapy

Naturopathy

Nettles (*Urtica dioica*)

Oats (*Avena sativa*)

Para-aminobenzoic acid (PABA)

Peppermint (*Mentha piperita*)

Phenylalanine

Pilates

Pleasant activities

Potassium

Prayer

Qigong

Recreational dance

Reflexology

Rehmannia (*Rehmannia glutinosa*)

Reiki

Sam-e (*S-adenosyl methionine*)

Schizandra (*Schizandra chinensis*)

Sedariston

Selenium

Siberian ginseng (*Eleutherococcus senticosus*)

Skullcap (*Scutellaria lateriflora*)

Sleep deprivation

Sleep hygiene

Spirulina (*Arthrospira platensis*)

St Ignatius bean (*Ignatia amara*)

Sugar avoidance

Tai chi

Taurine

Tension tamer

Theanine

Tissue salts

Traditional Chinese medicine

Tragerwork

Tyrosine

Vervain (*Verbena officinalis*)

Wild yam (*Dioscorea villosa*)

Wood betony (*Stachys officinalis; Betonica officinalis*)

Worry Free

Yeast

Zinc

Zizyphus (*Zizyphus spinosa*)

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