



# A guide to what works for depression in young people



Rosemary Purcell, Siobhan Ryan, Faye Scanlan, Amy Morgan, Patch Callahan, Nick Allen, Anthony Jorm

[www.youthbeyondblue.com](http://www.youthbeyondblue.com) 1300 22 4636

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## CONTENTS

What is depression?	2
Are there different types of depression?	6
Getting help for depression	8
How family and friends can help	11
How to use this booklet	12
How this booklet was developed	16
A summary of what works for depression in young people	17

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### About the Authors

The authors of this guide are researchers at The Centre for Youth Mental Health, The University of Melbourne.

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## Complementary and lifestyle interventions

Bibliotherapy	18
Computer or internet treatments (self-guided)	19
Distraction	20
Exercise	20
Light therapy	21
Magnesium	22
Massage	22
Music	23
Relaxation training	23
SAMe (s-adenosylmethione)	24
St John's wort ( <i>Hypericum perforatum</i> )	24

## Medical interventions

Anti-convulsant drugs	26
Antidepressant medications	27
Anti-psychotic drugs	28
Electroconvulsive therapy (ECT)	28
Lithium	29
Transcranial magnetic stimulation (TMS)	29

## Psychological interventions

Art therapy	30
Behaviour therapy / Behavioural activation	31
Cognitive behaviour therapy (CBT)	31
Computer or internet treatments (professionally guided)	32
Creative play	33
Dance and movement therapy (DMT)	34
Eye movement desensitization and reprocessing (EMDR)	34
Family therapy	35
Hypnosis	36
Interpersonal therapy (IPT)	36
Problem solving therapy (PST)	37
Psychodynamic psychotherapy	38
Psychoeducation	39
Social skills training	40
Supportive therapy	40

## Interventions that are not routinely available

Ketamine	41
----------	----

## Interventions reviewed but where no evidence was found

References	44
------------	----

Appendix: What about interventions not reviewed here, but where evidence exists for adults?

A summary of the evidence for treatments in adults	47
--	----

# What is depression?

**We all feel sad or down from time to time – it's part of being human. Usually when we feel down it's a reaction to something, like fighting with family or friends, breaking up with someone or moving away from home. Sometimes, people say they are 'depressed' when they experience this kind of sadness, but in most cases it will pass in a few hours or days. However, depression is more than just a day or two of feeling sad or down.**

Depression becomes an illness (i.e. a 'depressive disorder') when feelings of sadness last longer than normal and stop the person from enjoying things he/she used to like, or from taking part in usual activities. When this happens, symptoms other than sadness also develop, such as feeling worthless. The person may find it harder than usual to focus at school or to perform well at work and may have problems getting along with family and friends.

## Tackling the stigma of depression

It is important to tackle the stigma that surrounds depression because it stops a lot of people from getting the support they need.

Many people who are depressed realise they need help, but are afraid or reluctant to seek support because they fear negative reactions from friends or family.

### Some common myths about depression

**Myth:** Depression is a sign of personal failure or weakness.

**Fact:** Depression is a much more common problem than most people realise. On average, one in six people – one in five women and one in eight men – will experience depression at some stage of their lives.<sup>1</sup> Anyone can become depressed whether they are young or old, male or female, rich or poor.

**Myth:** Depression is just laziness.

**Fact:** When people get depressed they often have less energy or motivation and may become less active or withdraw from family or friends. These common signs and symptoms of depression can sometimes be mistaken for laziness.

**Myth:** Something terrible has to have happened for someone to become depressed.

**Fact:** There is no one cause for depression. It often occurs due to a build up of stressful situations (e.g. pressure at school or work, relationship problems, low self-esteem) rather than any one event. It can also occur quite unexpectedly when a person is generally feeling quite good.

**Myth:** Depression is something you can just 'snap out of'.

**Fact:** Most people with depression will recover, however this often takes time and support. In cases of moderate to severe depression, seeking professional help is particularly important.

## DEPRESSION IN YOUNG PEOPLE

Mental health problems are the major health issues that young Australians face. Adolescence and early adulthood are often periods of great change – for example, developing a sense of identity, becoming more independent from parents and taking on greater responsibility during the transition from school into work or higher education. The challenges faced by many young people can lead to emotional problems.

Most people have their first experience of depression during adolescence or young adulthood. Overall, it is estimated that 6 to 7 per cent of young Australians aged 16 to 24 (or around 160,000 young people) will experience depression in any year. The rates of depression each year tend to be higher among young females (8.4 per cent) compared to young males (4.3 per cent).<sup>1</sup> All of these figures might even be an underestimate since research typically looks only at the rates of major depressive disorders, rather than milder forms of depression.

Depression in young people is also often associated with other mental health problems, including anxiety, drug or alcohol problems.<sup>2</sup>

### FAST FACT

**Around 1 in 4 young people aged 16 to 24 experience mental health problems during adolescence.**<sup>1</sup>

**It is important that young people who are experiencing depression get help as early as possible.** If depression is left untreated, young people are at risk of struggling in their studies or work, having difficulties in their relationships with family or friends, abusing alcohol, taking drugs or self-harming. If depression becomes severe, people may feel hopeless and begin to have thoughts of hurting themselves, or of ending their lives.

### DID YOU KNOW?

**Depression is one of the leading causes of disability among 15–24 year olds in Australia, far ahead of road traffic accidents.**<sup>2</sup>

Although depression affects many young people, few get treatment. **Over 75 per cent of Australian adolescents with serious mental health problems do not seek help from health services.**<sup>1</sup> This is extremely concerning because depression can be very disabling, especially if it is left untreated. Struggles with school, work or relationships can last longer and may lead to the person not achieving their full potential, be it at work or in their relationships. Depressive disorders are also the most common risk factor for suicide.

### ACT EARLY

**Because depression often starts before the age of 25, it makes most sense to provide treatment when it first develops; that is, during adolescence and emerging adulthood.**

<sup>1</sup> Australian Bureau of Statistics 2007 *Survey of Mental Health and Wellbeing: Summary of Results*. (Document 4326.0). Canberra: ABS; 2008.

<sup>2</sup> Begg S, Vos T, Barker B, Stevenson C, Stanley L, Lopez AD (2007) *The burden of disease and injury in Australia 2003*, AIHW PHE 82, April, Canberra.

# What is depression?

It is important to know that there are treatments that work for depression in young people. This booklet aims to help young people, their friends and family members understand more about depression and which treatment approaches may work. Just because a treatment is effective in treating depression in adults doesn't mean that it will necessarily work with young people. This booklet is designed to provide clear information about the effectiveness of a range of interventions – complementary and lifestyle, medical and psychological – for depression in young people aged 14 to 25.

## WHAT CAUSES DEPRESSION?

People often think depression is caused by something that has gone wrong, for example, a bad break-up, falling out with friends or failing an exam. While the exact cause of depression isn't known, a number of things can be associated with its development. Generally, depression does not result from a single event, but from a combination of recent events and other longer-term or personal factors.

### Life events

Factors such as family conflict, the loss of someone close to you, and traumatic experiences may lead to depression in young people. Other negative things – like being abused or bullied, feeling bad about yourself or the world, feeling alone or discriminated against – can all increase your chance of getting depression. Research suggests that continuing difficulties are more likely to cause depression than recent life stresses. However, recent events or a combination of events can 'trigger' depression in people who are already at risk because of past bad experiences or personal factors.

### Personal factors

- **Family history** – Depression can run in families and some people will be at an increased genetic risk. However, this doesn't mean that a person will automatically experience depression if a parent or close relative has had the illness. Life circumstances and other personal factors are still likely to have an important influence.
- **Personality** – Some people may be more at risk of depression because of their personality, particularly if they have a tendency to worry a lot, have low self-esteem, are perfectionists, are sensitive to personal criticism, or are self-critical and negative.
- **Serious medical illness** – Having a medical illness can trigger depression in two ways. Serious illnesses can bring about depression directly, or can contribute to depression through associated stress and worry, especially if it involves long-term management of the illness and/or chronic pain.
- **Drug and alcohol use** – Drug and alcohol use can both lead to and result from depression. Many people with depression also have drug and alcohol problems. More than 300,000 young Australians aged 16–24 experience a substance use disorder each year.<sup>1</sup>

### Changes in the brain

Although there has been a lot of research in this complex area, there is still much that we do not know. Depression is not simply the result of a 'chemical imbalance', for example because you have too much or not enough of a particular brain chemical. There are in fact many and multiple causes of major depression. Factors such as genetic vulnerability, severe life stressors, substances you may take (some medications, drugs and alcohol) and medical conditions can lead to faulty mood regulation in the brain.

Most modern antidepressants have an effect on your brain's chemical transmitters (serotonin and noradrenaline), which relay messages between brain cells – this is thought to be how medications work for more severe depression. Psychological treatments can also help you to regulate your moods.

Effective treatments can stimulate new growth of nerve cells in circuits that regulate mood, which is thought to play a critical part in recovery from the most severe episodes of depression.

Everyone is different and it's often a combination of factors that can contribute to a person developing depression. It's important to note that you can't always identify the cause of depression or change difficult circumstances. The most important thing is to recognise the signs and symptoms and seek help.

## WHAT ARE THE SYMPTOMS OF DEPRESSION?

### Symptoms of depression can include:

- feeling unhappy, moody or irritable most of the time
- feelings of emptiness or numbness
- losing interest and pleasure in activities that were once enjoyed
- change in appetite, eating habits or weight (e.g. either weight loss from having a poor appetite, or weight gain from turning to comfort foods and overeating)
- change in sleep habits (e.g. either difficulty sleeping, or sometimes staying in bed most of the day)
- tiredness, lack of energy and motivation (e.g. finding it hard to 'get going')
- difficulty concentrating and/or making decisions
- feeling bad, worthless or guilty, or being overly critical of oneself
- negative or 'down on yourself' thoughts
- thoughts of death or suicide.

Everyone experiences some of the symptoms above from time to time. However, for a person to have a diagnosis of a depressive disorder, he/she would have some of these symptoms for at least two weeks, nearly every day.

Not every person who is depressed has *all* of these symptoms. People differ in terms of the number of symptoms they have and the severity of their symptoms. As a guide, a person who has *mild depression* would have five or six of the symptoms listed, and may find it difficult to function at school, work and at home. A person who has *severe depression* would have most of the symptoms listed and clearly, would be unable to function in most parts of his/her life. A person with *moderate depression* would be in between mild and severe.

For more information about symptoms of depression, including symptom checklists, visit [www.beyondblue.org.au](http://www.beyondblue.org.au)

# Are there different types of depression?

**There are different types of depressive disorders. Symptoms can range from relatively minor (but still disabling) through to very severe.**

## MAJOR DEPRESSION

Sometimes this is called major depressive disorder, clinical depression, unipolar depression or simply depression. It involves low mood and/or loss of interest and pleasure in usual activities (like spending time with friends, playing sport, socialising), as well as other symptoms such as those described earlier.

The symptoms are experienced most days, nearly every day and last for at least two weeks. The symptoms interfere with the person's relationships. Since it's common for young people to have mood swings (e.g. feeling up sometimes, as well as down and more sensitive or irritable) as a regular part of growing up, it may be hard to diagnose this kind of depression if it is mistaken for normal adolescent mood swings.

Depression can be described as mild, moderate or severe; or melancholic or psychotic.

### • **Melancholia**

This is the term used to describe a severe form of depression where many of the physical symptoms of depression are present. For example, one of the major changes is that the person can be observed to move more slowly. The person is also more likely to have depressed mood that is characterised by complete loss of pleasure in everything or almost everything. It is very rare for melancholia and biological forms of depression to occur in young people.<sup>3</sup>

### • **Psychotic depression**

Sometimes people with a depressive disorder can lose touch with reality. Experiencing psychosis can involve seeing or hearing things that are not there (hallucinations), or having delusions (false beliefs that are not shared by others). For example, people with this type of severe depression may believe they are bad or evil, being watched or followed, or feel as though everyone is against them (paranoia), or that they are the cause of illness or bad events occurring around them.

### • **Antenatal and postnatal depression**

Depression in women has been shown to increase during pregnancy and early parenthood. Depression occurs in up to one in 10 women in Australia during pregnancy (called the antenatal period) and around one in seven women in the first year after the birth of the baby (called the postnatal period).<sup>4</sup>

Factors that may place women (including young women) at greater risk of developing depression during this time include:<sup>5</sup>

- A personal or family history of current or past mental health problems
- Negative or stressful life events (such as moving, unplanned pregnancy)
- Current or past history of abuse (physical, psychological, sexual)
- Lack of available support (e.g. practical or emotional support for being a single mum)
- Alcohol and /or drug problems.

For many mums, this may only be mild. For other mums, it lasts longer and can interfere with their mothering. Depression and anxiety during this time can have an impact on the health of the mother, her partner and can affect the baby's development.

## **BIPOLAR DISORDER**

Bipolar disorder used to be known as 'manic depression' because the person experiences periods of depression, but at other times, periods of mania. In between, he or she has periods of normal mood. Mania is like the opposite of depression and can vary in intensity – symptoms include feeling great, having plenty of energy, racing thoughts and little need for sleep, talking fast, having difficulty focusing on tasks, and feeling frustrated and irritable. This is not just a fleeting experience. Sometimes the person loses touch with reality and has episodes of psychosis. Experiencing psychosis involves seeing or hearing something that is not there (hallucinations), or having delusions (e.g. the person believing he or she has superpowers).

**Treatments for bipolar disorder are different from those for depression and are not covered in this booklet.**

## **DYSTHYMIC DISORDER (DYSTHYMIA – PRONOUNCED 'DIS-THIGH-MIA')**

The symptoms of dysthymia are similar to those of major depression, but are less severe.

However, in the case of dysthymia, symptoms last longer – a person has to have this milder depression for more than two years to be diagnosed with dysthymia.

## **SEASONAL AFFECTIVE DISORDER (SAD)**

SAD is a mood disorder that has a seasonal pattern. The cause of the disorder is unclear, however it is thought to be related to the variation in light exposure in different seasons.

It's characterised by mood disturbances (either periods of depression or mania) that begin and end in a particular season. Depression which starts in winter and subsides when the season ends is the most common. It's usually diagnosed after the person has had the same symptoms during winter for a couple of years. People with Seasonal Affective Disorder depression are more likely to experience lack of energy, sleep too much, overeat, gain weight and crave for carbohydrates. SAD is very rare in Australia, and more likely to be found in countries with shorter days and longer periods of darkness such as in the cold climate areas of the Northern Hemisphere.

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3 Parker G, Roy K., Adolescent depression: a review, *Australian and New Zealand Journal of Psychiatry* 2001; 35(5):572-580.

4 Buist A, Bilszta J. The *beyondblue* National Postnatal Depression Program, Prevention and Early Intervention 2001–2005, Final Report. Volume 1: National Screening Program. 2006a, *beyondblue*.

5 Milgrom J, Gemmill AW, Bilszta J et al. Antenatal risk factors for postnatal depression: a large prospective study. *Journal of Affective Disorders* 2008; 108: 147-157.

# Getting help for depression

**It's important for young people who are experiencing depression to get support and help. Many young people turn to family and friends for support rather than talking to a health professional. Family and friends play an important role in supporting a young person through a period of depression (see 'How family and friends can help' on page 11). In many cases, young people may need help from a doctor or mental health professional to treat the depression and to get their life back on track. This is particularly important if the depression is moderate or severe.**

It can be hard to know where to begin to look for professional help for depression. **What's important to remember is that there are lots of people out there who can help.** There are different types of health professionals who can provide help for depression.

## 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 depression
- discuss available treatments
- work with the young 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
- refer a young person to a mental health specialist such as a psychologist or psychiatrist.

Before consulting a GP about depression, it's important to ask the receptionist to book a longer or double appointment, so there's plenty of time to discuss the situation without feeling rushed. If you aren't able to make a longer appointment, it's a good idea to raise the issue of depression early in the consultation so there is plenty of time to discuss it.

Ideally, you should consult your regular GP or another GP in the same clinic, as medical information is shared within a practice. While some GPs may be more confident at dealing with depression and anxiety than others, the majority of GPs will be able to assist or at least refer you to someone who can, so they are the best place to start.

### Some things to think about when getting help

- GPs and other health professionals sometimes use words we don't understand. If you don't understand something, it's important – and OK – to ask them to explain.
- Sometimes, it can be hard to keep track of all the information a health professional might give you. It helps to ask them to write the important things down so you don't forget them.
- You might prefer to see a health professional of a particular gender. If you do, tell the receptionist when you book the appointment.
- It's OK to bring someone along with you to your appointment (like a parent, friend or partner) if it makes you feel more comfortable.

## PSYCHIATRISTS

Psychiatrists are doctors who have undergone further training to specialise in mental health.

A person usually sees a psychiatrist when the depression is severe or is not responding to treatment. Psychiatrists can make medical and psychiatric assessments, conduct medical tests, provide therapy and prescribe medication. They often use psychological treatments such as cognitive behaviour therapy (CBT), interpersonal therapy (IPT) and/or medication.

If the depression is severe and hospital admission is required, a psychiatrist will be in charge of the person's treatment.

Most psychiatrists work in private practice, but some work for hospitals and community mental health clinics. A referral from a GP is needed to see a psychiatrist. Rebates can also be claimed through Medicare.

## 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 problems. Psychologists and clinical psychologists are not doctors and cannot prescribe medication in Australia.

Some psychologists work for community mental health services, while others are in private practice. 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.

### Helpful questions to ask a health professional

- What are my different treatment options?
- Are there any side-effects of this treatment? What are they?
- How much does it/will it cost?
- Can I claim money back for it on Medicare?
- What should I do if I notice any side-effects?
- What happens if I don't feel like I'm getting any better from this treatment?
- Always remember, sometimes you need to shop around to find the best person to support you. If you're not happy with the service you're getting, it's best to try another one. There are lots of people out there who can help.

### What is a Mental Health Treatment Plan?

A Mental Health Treatment Plan is a treatment strategy prepared by a GP in consultation with a young person and looks at a person's mental health needs and goals, and outlines treatment options and support services to reach those goals.

### Confidentiality

It is important for young people to understand that speaking with a health professional is confidential. All health professionals are legally required to keep anything you tell them a secret. This is called 'patient-doctor confidentiality' and means that anything said in your consultation is not repeated to others. Doctors can't tell your parents or the police about what you have told them, even if you've used alcohol or drugs, or had sex. Your friends and family must also respect your privacy and cannot access details about your mental health or treatment unless you say it is ok.

Sometimes, you may feel that it would be helpful for the health professional to speak to someone else, like a family member, boyfriend/girlfriend, or a friend. In these cases, you need to give the health professional permission to speak to that person.

There are some situations where it may be necessary for a health professional to break confidentiality. These are when:

- you give consent
- they think you might be about to hurt yourself or somebody else
- they are talking to another medical professional in confidence about you
- they are required to by a court of law.

In these cases, the health professional will usually speak with the young person about the need to break confidentiality.

It's a good idea to discuss confidentiality and your rights with your treating health professional/s early on, and ask any questions you may have.

# Getting help for depression

## **ACCREDITED MENTAL HEALTH SOCIAL WORKERS**

Accredited Mental Health Social Workers specialise in working with and treating mental health conditions such as depression. Many 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 difficulties functioning because of a mental health problem (such as depression) to participate in normal, everyday activities. Some occupational therapists are registered with Medicare to provide focused psychological strategies.

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

## **MENTAL HEALTH NURSES**

Mental health nurses are specially trained to care for people with mental health problems. They work with psychiatrists and GPs to review the state of a person's mental health, monitor medication and provide information about mental health problems and treatment. Some have training in psychological therapies.

## **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 approaches to treating depression. 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 services. When seeking a complementary therapy, 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 therapies which are supported by evidence that shows they are effective. This booklet will help you to figure out which approaches have the most evidence to show they are effective.

## The lowdown on rebates

Even when you suspect you need help, you might wonder whether you can afford to see a health professional, or even if it's really worth the money. Fortunately, in Australia, treatments for health problems, including mental health problems, are either completely free or partly paid for by the Government – all you need is a Medicare number.

If you have a Medicare number and your GP bulk bills, the consultation won't cost you anything. If your GP doesn't bulk bill, you may have to pay up to \$65 for a consultation. Medicare will then refund around half of this cost.

Medicare rebates are also available for psychological treatments undertaken with psychiatrists, psychologists, clinical psychologists, social workers and occupational therapists in mental health under the Australian Government's Better Access initiative.

These health professionals may use any number of different treatments and strategies, such as psychoeducation, cognitive behaviour therapy (CBT), relaxation strategies, skills training, or interpersonal therapy (IPT).

The Medicare rebates for these treatments generally range from 75 per cent to, in some cases, 100 per cent of the treatment cost. In one calendar year, a person who is eligible can receive Medicare rebates for up to 10 individual consultations with a mental health professional and up to 10 group therapy sessions.

Free or subsidised psychological treatment is also available through the Access to Allied Psychological Services (ATAPS) initiative for sessions with occupational therapists and social workers in mental health, mental health nurses, psychologists, and Aboriginal and Torres Strait Islander mental health workers.

Qualifying for rebates under Better Access or ATAPS is usually as simple as having had a Mental Health Treatment Plan drawn up by a GP, or in some instances via a referral from a psychiatrist or paediatrician (in the case of a young person). If you are unsure if you are eligible for subsidised treatment, check with your GP.

To find out more about costs, including getting a Medicare card, visit [www.youthbeyondblue.com](http://www.youthbeyondblue.com) and check out Fact sheet 24 – *Getting help for depression and anxiety: Confidentiality and costs*, or go to [www.beyondblue.org.au](http://www.beyondblue.org.au) and take a look at Fact sheet 24 – *Getting help: How much does it cost?*

## How family and friends can help

**Family and friends often play an important role in helping a young person who is depressed. They can help get appropriate professional help and support the young person through the process of treatment and recovery.**

When someone you care about is experiencing depression, it can be hard to know what the right thing is to do. Sometimes, it can be overwhelming and 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 depression. It can be helpful to talk to a trusted adult about your concerns.

Information about depression and practical advice on how to help someone you are worried about is available at [www.youthbeyondblue.com](http://www.youthbeyondblue.com). *beyondblue* also has a range of helpful resources, including fact sheets, booklets, wallet cards and DVDs about depression, available treatments and where to get help – go to [www.beyondblue.org.au](http://www.beyondblue.org.au)

# How to use this booklet

There are many different approaches to treating depression. 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 depression – see ‘How this booklet was developed’ on page 16. However the amount of evidence supporting the effectiveness of different approaches can vary greatly. In addition, some of the approaches listed are not available or used as treatments – for example, ketamine is an experimental approach that is not available as a treatment for depression, but is has been used in research studies to see if it reduces depression.

**This booklet aims to help young people make informed choices by providing a summary of the scientific evidence for each treatment approach.**

This booklet summarises the evidence for interventions for depression in young people aged 14 to 25 years. Since depression usually begins in adolescence and young adulthood, it is important to understand and find effective treatments that are suitable for this age and stage of life. **Treatment approaches that work for adults may not necessarily be effective for adolescents and young adults.** This might be for a range of reasons, including differences in how severe the depression is or the duration of the illness. A summary of the evidence for adults in general (i.e. 18 to 65 years of age) are summarised in the Appendix on page 47.

## Who’s who?

Throughout the treatment reviews, we refer to:

- an **adolescent** as someone aged 14 to 17 years
- a **young adult** as someone aged 18 to 25 years.

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



There are lots of good quality studies showing that the approach works.



There is 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.

**If a treatment approach gets the ‘thumbs up’ does that mean it will work for me?**

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. While it might work for the average person, some people will have complications, side-effects, or incompatibilities with their lifestyle. There is no substitute for the advice of a mental health practitioner, who can advise on the best available treatment options.

## What should I think about when I'm trying to decide which treatment approach might be best for me?

The best approach is to seek advice, try an intervention that works for most people and that you are comfortable with. If you do not recover quickly enough (within a few months), or experience problems with the treatment, then try another. It's important not to get discouraged if a treatment isn't working. Sometimes, it might involve trying a few different approaches before finding one that works best for you. It is also important to remember that sometimes it can take a while for a treatment to 'kick in'. Rather than looking for immediate results, it is often necessary to stick with an intervention for a number of weeks before deciding that it's not working.

### Only one intervention at a time?

Combining different forms of interventions that work for depression is often the best approach. An example is combining a prescribed medication with a psychological (talking) therapy.

However, sometimes there can be side-effects from combinations – especially prescribed or complementary medications. Always check with a health professional whether it is safe to use two treatments at the same time.

Whatever approaches are used, they are best done under the supervision of a GP or a mental health professional.

### Another factor to consider is beliefs about treatment.

An intervention is more likely to work if a person believes in it and is willing to commit to it. Even the most effective treatments will not work if they are only 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 are strongly in favour of medical approaches. **Remember: strong beliefs in a particular treatment may not be enough, especially if there is no good evidence that the approach works.**

# How to use this booklet

**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:**

## Complementary and lifestyle interventions

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

## Medical interventions

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

## Psychological interventions

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

## Interventions that are not routinely available

Approaches that are not currently available or used as a treatment for depression, 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 young 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.**

## Are ALL the available treatments reviewed in this booklet or are some missing?

This booklet has considered all of the interventions (medical, psychological and complementary/lifestyle) that are claimed to be useful for depression. However there are many treatments that were not able to be reviewed since there have not been any studies of them in young people (see *Interventions reviewed but where no evidence was found* on page 42).

It's also common for young people with depression to experience other mental health problems, particularly anxiety, and alcohol or drug problems. In these cases, different treatment approaches might be used to help manage the other condition.

Unfortunately, this booklet does not review interventions that are designed to treat other conditions, even though they may be used by someone with depression.

Another source of detailed information on the treatment of depression in young people is *beyondblue's Clinical Practice Guidelines: Depression in adolescents and young adults* ([www.beyondblue.org.au](http://www.beyondblue.org.au)). These guidelines, which are approved by the National Health and Medical Research Council (NHMRC), were developed by an expert advisory group including mental health professionals, people who have experienced depression, anxiety and related disorders, and carers. They are based on a review of all available quality international research findings. The guidelines and a number of companion documents are available to download or order from [www.beyondblue.org.au](http://www.beyondblue.org.au)

The main difference between the Clinical Practice Guidelines and this booklet is that this booklet has been written for young people aged 14–25 to help them make informed choices about potential treatment approaches for depression by providing a summary of the scientific evidence for each intervention in an easy-to-read format.

In contrast, the Clinical Practice Guidelines have been developed and written for health professionals and other service providers (for example, counsellors or school welfare coordinators) who work with young people experiencing depression. The table below shows other important differences between this booklet and the Clinical Practice Guidelines.

### Key differences between this booklet and the Clinical Practice Guidelines: Depression in adolescents and young adults

#### A guide to what works for depression in young people

Developed and written for young people to understand the scientific evidence behind a range of interventions for depression.

Provides reviews of all levels of evidence for complementary and lifestyle therapies (including self-help approaches), psychological and medical interventions for depression in 14–25 year olds.

Provides ratings of the effectiveness of each approach according to a visual “thumbs up” scale. Criteria for each rating are provided on page 12.

Focuses on the evidence for treatments of acute episodes of depressive disorders.

#### Clinical Practice Guidelines

Developed and written for health and other professionals who work with young people to provide clinical guidance for preventing and treating depression.

Reviews the high-level evidence for psychological and medical treatments for depression in 13–24 year olds.

Provides formal recommendations according to NHMRC Grades of Evidence. In the absence of high Grades of Evidence, Good Practice Points are included for clinical guidance.

Focuses on evidence for prevention, acute treatment, maintenance and relapse prevention of depressive disorders and the treatment of bipolar disorder.

# How this booklet was developed

## SEARCHING THE LITERATURE

For each intervention review, the scientific literature was searched systematically on a number of databases, including the Cochrane Library, PubMed, PsycINFO and Web of Science. There was no time limit for how long ago the research was done, but articles had to be in English. For many of the searches, we relied on work that had been done for an adult version of this booklet,<sup>6</sup> as well as two review articles by one of the authors.<sup>7,8</sup>

## WHAT TYPE OF STUDIES WERE INCLUDED?

Studies were included if they involved people aged 14 to 25 who had been diagnosed with a depressive disorder, or who had sought help for depression. We didn't include studies that recruited people through advertising, or included people who scored in the not depressed point on a scale of depression. These groups were excluded as they may be different from people who are seeking help for depression, which is the focus of this booklet.

## WHAT MAKES A STUDY 'GOOD QUALITY'?

Research evidence can vary in terms of how strong or trustworthy it is. Research that involves a 'randomised controlled trial' (RCT) is generally considered to be good quality, because the participants have been randomly assigned to either the treatment group or an appropriate control group that does not receive the treatment. Being 'randomised' is important because this reduces the chance of bias creeping into the groups; an example being that all the people with severe depression end up in one group, and all the people with mild depression end up in the other. Randomly assigning people to groups makes this less likely to happen.

When there is a number of RCTs on a particular treatment, researchers might combine all the findings into a 'systematic review' or 'meta-analysis'. These are also considered good-quality evidence, because combining the results of several similar studies is usually more consistent than looking at one study alone.

Sometimes, there may not be an RCT or systematic review on a particular treatment. This is especially the case for newer interventions, or treatment approaches that have only recently been used with a particular group (in this case, young people aged 14 to 25). In those cases, the only type of evidence that exists might be small case studies involving several people who have all received the treatment. This type of research isn't considered as good quality because the results might not 'translate' beyond the few people included in the study.

It is also important to understand that many research studies exclude people with serious suicidal thoughts, severe depressive illnesses, and other complicating factors, such as drug and alcohol use. However, the reality is that many people experience these issues when they are depressed. Therefore, the conclusions we can draw from the evidence are limited if only select groups of depressed individuals are included in studies.

These sorts of studies are helpful in understanding whether a single type of treatment does or doesn't work. But in the real world, interventions are often combined. When treatments are used together, their effects may be different. Understanding this requires different research studies that look at how treatments work in combination.

## WRITING THE REVIEWS

Each review was written by one of the authors who evaluated the research evidence. The review was then checked by a second author for readability and clarity. All authors discussed and reached consensus on the 'thumbs up' rating for each intervention.

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6 Jorm AF, Allen NB, Morgan AJ, Ryan S and Purcell R. *A guide to what works for depression* (2nd Edition), *beyondblue*. Melbourne: 2013.

7 Morgan, AJ & Jorm, AF (2008). 'Self-help interventions for depressive disorders and depressive symptoms: a systematic review.' *Annals of General Psychiatry*, 7, 13.

8 Jorm AF, Allen NB, O'Donnell CP, Parslow RA, Purcell R & Morgan AJ. (2006) 'Effectiveness of complementary and self-help treatments for depression in children and adolescents.' *Medical Journal of Australia*, 185(7): 368-372.

# A summary of what works for depression in young people

## Complementary and lifestyle interventions

### Light therapy

For Seasonal Affective Disorder in 14–17 year olds:



For Seasonal Affective Disorder in 18–25 year olds:



### Massage

In 14–17 year olds:



## Medical interventions

### Antidepressant medication

In 14–17 year olds:



In 18–25 year olds:



## Psychological interventions

### Behaviour therapy/Behavioural activation

In 18–25 year olds



### Cognitive behaviour therapy (CBT)



### Family therapy

In 14–17 year olds:



### Interpersonal therapy (IPT)

In 14–17 year olds:



In 18–25 year olds:



### Problem solving therapy (PST)



# Complementary and lifestyle interventions

**Bibliotherapy**  
(e.g. reading self-help books)

Evidence rating



## WHAT IS IT?

Bibliotherapy is a form of self-help that involves reading books or other written material (sometimes over the internet). The books provide information and homework exercises that the readers work through on their own. Only one self-help book for depression (*Feeling Good*) has been researched with adolescents.

## HOW IS IT MEANT TO WORK?

Most bibliotherapy teaches people how to use cognitive behaviour therapy (CBT) on themselves (see cognitive behaviour therapy page 31). It can be used alone, or guided by a health professional. Guidance may involve a health professional assessing the person, identifying depression as the main problem and recommending an appropriate self-help book. In some cases, the health professional may also contact the person to see if the book is helpful.

## DOES IT WORK?

Only one study has examined professionally-guided bibliotherapy with depressed adolescents. The book used was *Feeling Good*. Thirty participants were given four weeks to read the book and complete the exercises included. They received weekly phone calls to see how many pages they had read and how many of the exercises they had completed. Bibliotherapy was found to be better than no treatment. It reduced depressive symptoms immediately following treatment and this benefit was still present one month later.

Many people use self-help books to help with depression without ever contacting a health professional. No studies have looked at whether bibliotherapy works without health professional involvement in any age group.

## ARE THERE ANY RISKS?

There are no known risks. However, bibliotherapy may not be suitable for everyone. Some people may lack enough concentration to read the book or they may have poor reading skills.

## RECOMMENDATION

There is not enough evidence to say whether bibliotherapy works for treating depression in young people.

## Computer or internet treatments

(self-guided)

Evidence rating



### WHAT ARE THEY?

Computer or internet treatments are types of self-help that are delivered through websites or interactive CDs. The most common is computerised cognitive behaviour therapy (CCBT). CCBT involves a series of sessions of cognitive behaviour therapy (CBT) on a computer. CCBT can be used with or without support from a professional. This review covers self-guided CCBT, where there is no involvement from a professional (see page 32 for the review on professionally guided CCBT). One CCBT program that is suitable for young people and freely available on the internet is:

- MoodGYM ([www.moodgym.anu.edu.au](http://www.moodgym.anu.edu.au))

Other computer or internet treatments combine a number of different psychological therapies (e.g. social skills training, CBT, relaxation training). Two of these programs are suitable for young people and are freely available on the internet:

- Reach Out Central ([www.reachoutcentral.com.au](http://www.reachoutcentral.com.au))
- E-couch ([www.ecouch.anu.edu.au](http://www.ecouch.anu.edu.au))

There are also computer programs designed to target problems in thinking that can be associated with depression, like memory problems.

### HOW ARE THEY MEANT TO WORK?

CBT is helpful for depression when delivered by a health professional. Because CBT is carried out in a highly-structured way (in a series of steps), it is well suited to being done via a computer.

### DO THEY WORK?

Only one study has tested a self-guided version of CCBT in young adults. One hundred and sixty depressed young adults received access to a website offering CCBT or were directed to a website with information about depression as a comparison. Participants were free to access the websites when they wanted for eight months. Depression in the CCBT group improved a small amount more than depression in the comparison group. However, this website is not currently available to the public.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough good-quality evidence yet to say whether self-guided computer or internet treatments (including CCBT) work.

## Distraction

Evidence rating



### WHAT IS IT?

Distraction is taking attention away from depression and instead, focusing on pleasant or neutral thoughts and actions.

### HOW IS IT MEANT TO WORK?

Depressed people tend to ruminate (think too much) about how they are feeling. They might believe that this will lead to a greater understanding of why they are depressed and how they can get better. Ruminating, however, while feeling depressed may lead to more negative thinking and make depression symptoms worse. Distraction can be used to interfere with rumination and stop negative thinking. Once the depressed mood has lifted, more effective problem solving can occur.

### DOES IT WORK?

Only one study has looked at the effects of distraction on mood in 26 depressed adolescents. The distraction task involved thinking about and visualising neutral things (e.g. a kettle coming to the boil, or a band playing outside). Distraction was compared with a rumination task that involved focusing on the person's feelings at the time (e.g. 'how you feel about your friendships' or 'how your body feels right now'). The study found that rumination maintained or worsened the depressed mood, whereas distraction reduced depressed mood. The long-term effects of the therapy were not evaluated.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough evidence to say whether distraction works. It may be helpful for improving depressed mood temporarily, but it is likely that other interventions are needed for more lasting improvements.

## Exercise

Evidence rating



### WHAT IS IT?

There are two main types of exercise. *Aerobic* exercise (such as jogging or swimming) which works the heart and lungs and *anaerobic* exercise (such as weight training) which strengthens muscles.

### HOW IS IT MEANT TO WORK?

It is not clear how exercise helps to improve depression, but low levels of physical activity are often linked with depression. There are a few ideas on how exercise might work, such as:

- improving sleep patterns
- changing the levels of chemicals in the brain, such as serotonin, endorphins or stress hormones
- interrupting negative thoughts that make depression worse
- increasing the sense of being able to cope, by learning a new skill
- mixing with others, if the exercise is done in a group.

### DOES IT WORK?

There have been two low-quality studies of exercise in depressed adolescents. In both studies, the number of participants was low (11 in one study and 19 in the other) and all were inpatients in a psychiatric hospital at the time. Participants in both studies had behaviour problems as well as depression. Both studies compared exercising (such as jogging or doing weight training) to doing other activities (such as board games) instead of exercising. Neither study found any benefit of exercise in reducing depression.

### ARE THERE ANY RISKS?

People may injure themselves by exercising.

### RECOMMENDATION

Whilst there is good evidence that exercise is helpful for depression in adults, more high-quality research is needed before any conclusions can be made about whether exercise works for depression in young people.

## Light therapy

### Evidence rating



FOR SEASONAL AFFECTIVE DISORDER IN 14–17 YEAR OLDS



FOR SEASONAL AFFECTIVE DISORDER IN 18–25 YEAR OLDS

THERE ARE NO STUDIES IN THIS SPECIFIC AGE GROUP, BUT STUDIES IN ADULTS IN GENERAL SHOW LIGHT THERAPY TO BE EFFECTIVE.



FOR NON-SEASONAL DEPRESSION



THERE IS A RISK OF MILD SIDE-EFFECTS SUCH AS NAUSEA, HEADACHE, JUMPINESS AND EYE IRRITATION. IF THE WRONG TYPE OF LIGHT BULB IS USED, THERE IS A RISK OF EYE DAMAGE FROM INFRA-RED RADIATION.

### WHAT IS IT?

Light therapy involves exposing the eyes to bright light for certain lengths of time, often in the morning. The light comes from a special box or lamp which the person sits in front of. These light boxes/lamps can be bought over the internet. Different light boxes may use different parts of the light spectrum and different light intensity.

### More information

Light therapy boxes can be ordered over the internet. **However, not all light therapy boxes have been tested to make sure they are safe and effective.**

- It's important to check with a health professional before buying a light therapy box.
- If you do decide to buy one, it's important to understand what you're buying and what features to consider.
- It is particularly important to check the light box's safety features.

### HOW IS IT MEANT TO WORK?

Light therapy is mainly used to treat Seasonal Affective Disorder (SAD), particularly depression that comes on during winter. It is thought to work by fixing problems with the body's internal rhythms caused by less sunlight in winter. It is less clear how it is meant to work in depression that does not vary with the seasons.

Light therapy boxes are described in terms of what 'lux' they put out. Lux is a measure of the amount of light you receive at a specific distance from a light source. Light boxes for light therapy usually produce between 2,500 lux and 10,000 lux (with 10,000 lux being typical). The intensity of a light box may determine how long the box needs to be used. For example, 10,000 lux light boxes usually require 30-minute sessions, while 2,500 lux light boxes may require two-hour sessions.

### DOES IT WORK?

Three studies have looked at light therapy in adolescents. In one study, 28 children and adolescents with SAD received either light therapy or a placebo (dummy) treatment for one week. The light therapy group received one hour of bright light (10,000 lux) plus two hours of 'dawn stimulation' (a maximum of 250 lux at 6.30am). The dummy treatment consisted of five minutes of dawn stimulation and one hour wearing clear glasses while doing things like reading and watching TV. The result showed that light therapy was better in reducing symptoms of SAD than the dummy treatment.

A second study compared light therapy with relaxation therapy in nine depressed adolescents. Five had SAD and four had non-seasonal depression. Participants received either light therapy (2,500 lux for two hours in the evening) or relaxation therapy, which involved listening to a 15 minute tape-recording followed by 90 minutes of reading or doing homework. Both treatments were given for six days. Light therapy was more effective than relaxation in decreasing symptoms of depression, but only in the group with SAD.

A third study looked at light therapy in 28 adolescents with non-seasonal depression. Participants received light therapy (2,500 lux) or dim light placebo (50 lux) for one hour in the morning for a week. After a week participants then swapped treatments. Both light therapy and dim light placebo improved depression with no difference between them.

### ARE THERE ANY RISKS?

Light therapy is safe, but may produce mild side-effects such as nausea, headache, jumpiness and eye irritation. If the wrong type of light bulb is used (e.g. incandescent lights) there is a risk of eye damage from infra-red radiation. Cost is important to consider as light therapy boxes can be expensive (usually ranging from \$250 to \$550).

### RECOMMENDATION

There is some evidence that light therapy is effective for adolescents with SAD, a disorder which is rare in Australia. There is no good-quality evidence that it works for young people with non-seasonal depression.

There have not been any studies of light therapy in young adults aged 18–25 who have SAD or other forms of depression. There is a lot of research to show that light therapy is effective in adults in general who have SAD. It is fair to assume that it would also be effective in young people aged 18–25 with SAD, but specific studies in this age group need to be carried out.

## Magnesium

### Evidence rating



SIDE-EFFECTS OF LARGE DOSES OF MAGNESIUM INCLUDE MILD STOMACH PAIN AND DIARRHOEA. TAKING AN EXCESSIVE AMOUNT OF MAGNESIUM CAN BE TOXIC AND EVEN LEAD TO DEATH.

### WHAT IS IT?

Magnesium is a mineral present in food. It can also be taken as a supplement.

### HOW IS IT MEANT TO WORK?

It has been suggested that many cases of depression are due to a lack of magnesium in nerve cells.

### DOES IT WORK?

There has been only a single case study where magnesium was given as an intervention to a depressed adolescent. The adolescent showed rapid improvement in his depression after taking magnesium supplements.

### ARE THERE ANY RISKS?

Taking too much magnesium can be toxic and even lead to death.

### RECOMMENDATION

There is not enough evidence to say whether or not magnesium works for depression in young people.

## Massage

### Evidence rating



IN 14–17 YEAR OLDS



IN 18–25 YEAR OLDS

### WHAT IS IT?

Massage involves manipulating soft body tissues by 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?

It is not known how massage might help to treat depression. However, it is possible that it reduces stress hormones or reduces feelings of physical tension or arousal.

### DOES IT WORK?

There have been two good studies of massage in depressed adolescents. One study in depressed adolescent mothers compared massage to relaxation training and the other study compared massage to watching relaxing videos. Both studies found that massage produced a greater improvement in depression symptoms 30 minutes after receiving a massage. The study did not look at the longer-term effects of the treatment.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is some evidence that massage is effective in the short term in depressed adolescents. However, there are no studies about whether massage works in young adults. Research is needed to find out whether it works in young adults.

## Music

Evidence rating



### WHAT IS IT?

People can use music to change their mood. Music can be used as a self-help therapy or can be carried out with the help of a professional music therapist.

### HOW IS IT MEANT TO WORK?

Music appears to affect brain systems that control emotions. This emotional effect could be due to the rhythm and melody of the music or to the personal meaning of the music to the individual.

### DOES IT WORK?

Two studies have looked at the immediate effect of listening to music. In one study, 28 adolescent girls with dysthymia (mild depression) listened to uplifting pop songs or tried to relax on their own. Even though the adolescents liked the music, it did not change their depressed mood. In the second study, 48 depressed young adult mothers listened to either classical or rock music. Both types of music improved mood. However, these studies were low-quality studies since there was no comparison group (i.e. a group who did not listen to music). No studies have looked at the effects of regularly listening to music over a period of days or weeks.

There have been no studies of music in young adults.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough good evidence to say whether listening to music can help depression either immediately or in the long term.

## Relaxation training

Evidence rating



### WHAT IS IT?

There are several different types of relaxation training. The most common type is called 'progressive muscle relaxation'. This teaches a person to relax by tensing and then relaxing specific groups of muscles. Another type involves thinking of relaxing scenes or places. Relaxation training can be learned from a professional or done as self-help. On the internet, you can find instructions for relaxation exercises which are free or you can buy various CDs which guide you through the process.

### HOW IS IT MEANT TO WORK?

Relaxation training is most commonly used as an intervention for anxiety. Because anxiety and depression often occur together, it may reduce depression as well.

### DOES IT WORK?

Three good-quality studies have compared relaxation to other interventions for depression. In one study, 32 depressed adolescent mothers received 10 sessions of massage therapy or relaxation training. The relaxation training did not improve depression symptoms, but it did reduce anxiety. A second study gave 48 depressed adolescents five to eight sessions of either cognitive behaviour therapy (CBT) or relaxation. Relaxation training reduced depressive symptoms by the end of the study, but it was much less effective than CBT. At six month follow-up, however, there were few differences in depression levels between the two groups. A third study compared light therapy to relaxation in nine adolescents (five with Seasonal Affective Disorder (SAD) and four with non-seasonal depression). Relaxation training was more effective than light therapy for those with non-seasonal depression, but it had no benefit for the group with SAD.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough evidence to say whether relaxation training works for young people with depression.

**SAMe**  
(s-adenosylmethione)

#### Evidence rating



 PEOPLE WHO ARE USING ANTIDEPRESSANT MEDICATION OR WHO HAVE BIPOLAR DISORDER SHOULD NOT USE SAMe UNLESS UNDER THE SUPERVISION OF A DOCTOR/HEALTH PRACTITIONER.

#### WHAT IS IT?

SAMe (pronounced 'sammy') is a compound that is made in the body and is involved in many biochemical reactions. SAMe supplements are available from some health food shops and pharmacies and generally, are quite expensive.

#### HOW IS IT MEANT TO WORK?

SAMe is thought to affect the outer walls of brain cells, making cells better able to communicate with each other. It may also be involved in producing chemical messengers in the brain that are thought to be affected by depression.

#### DOES IT WORK?

SAMe has not yet been properly tested in well-designed studies with young people. It has been tried only in one adolescent with depression, who had some benefit when he took the pills as instructed.

#### ARE THERE ANY RISKS?

The Australian Therapeutic Goods Administration (Australia's regulatory agency for medical drugs) has warned that people who are using prescription antidepressants or who have bipolar disorder should not use SAMe unless under the supervision of a health practitioner.

#### RECOMMENDATION

There is no good-quality evidence that SAMe works for young people with depression. Even though research has shown that SAMe is helpful for adults with depression, more research should be done on its effectiveness in young people.

**St John's wort**  
(Hypericum perforatum)

#### Evidence rating



 ST JOHN'S WORT INTERACTS WITH A NUMBER OF PRESCRIPTION MEDICATIONS (SEE OPPOSITE), 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 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 only available with a prescription.

#### HOW IS IT MEANT TO WORK?

It is not clear how St John's wort works. However, it might increase the supply of certain neurotransmitters (chemical messengers) in the brain that are thought to be affected in depression. These are serotonin, norepinephrine and dopamine.

#### DOES IT WORK?

There has been only one study of St John's wort in 26 depressed adolescents. Participants were asked to take 300 milligrams of St John's wort for eight weeks. They could also continue receiving other treatments for depression. The results were mixed. The intervention worked for those who took the correct dose for the full eight weeks. But over half did not complete the eight week course. This was either because their depression symptoms got worse and they were taken out of the study, or they weren't taking the right dose. This study was of poor quality because there was no placebo ('dummy pill') included.

#### ARE THERE ANY RISKS?

When taken alone, St John's wort has fewer side-effects than antidepressant medications. However, St John's wort interacts with many prescription medications. It can affect how these medications work and produce serious side-effects.

According to the Therapeutic Goods Administration, people taking any of the following medications should not start using St John's wort:

- oral contraceptives (aka 'the pill')
- 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)
- triptans (sumatriptan, naratriptan, rizatriptan, zolmitriptan).

## **RECOMMENDATION**

There is not enough evidence to know whether St John's wort works for depression in young people. More research is needed.

Any young person taking prescribed medications (including 'the pill') should check with a doctor before deciding whether to take St John's wort because of the risk of drug interactions. If a young person is already taking it in combination with other prescribed medication, he/she should see a doctor to talk about possible drug interactions.

# Medical interventions

## Anti-convulsant drugs

### Evidence rating



COMMON SIDE-EFFECTS INCLUDE FEELING DIZZY, HEAVILY SEDATED/SLEEPY, NAUSEA, TREMOR, WEIGHT GAIN, AND THE RISK OF DEVELOPING A SERIOUS RASH.

### WHAT ARE THEY?

Anti-convulsant drugs are used mainly to treat epilepsy. Some are also commonly used as a 'mood stabiliser' in bipolar disorder, which means that they help to reduce intense changes in mood. Anti-convulsants have also been used to treat depression in adults that hasn't responded to other medications or psychological therapies. These drugs are usually used along with an antidepressant, but they can be used on their own.

### More information

The most common anti-convulsants are known by the names *valproate*, *carbamazepine* and *lamotrigine*.

### HOW ARE THEY MEANT TO WORK?

Anti-convulsant drugs work by reducing excessive firing of nerve cells in the brain. This helps to calm over-activity in the brain.

### DO THEY WORK?

There are no good-quality studies of anti-convulsants for treating depression in young people. One study looked at the medical files of nine adolescents with depression who received an anti-convulsant to see whether it improved their symptoms. Eight of the nine adolescents were also on antidepressant medication. Overall, three showed good improvement after the anti-convulsant was added to their treatment, two showed mild improvement and four had no improvement.

### ARE THERE ANY RISKS?

Different types of anti-convulsants have different side-effects. Common side-effects include developing a serious rash, feeling dizzy, nauseous, tremor (shakes) and weight gain. Most side-effects lessen over time.

### RECOMMENDATION

There is not enough evidence as to whether anti-convulsants help in the treatment of depression in young people.

## Antidepressant medications

(aka 'antidepressants')

### Evidence rating



IN 14–17  
YEAR OLDS



IN 18–25 YEAR OLDS  
WITH MODERATE  
TO SEVERE  
DEPRESSION.

THERE ARE NO STUDIES IN THIS SPECIFIC AGE GROUP, BUT STUDIES IN ADULTS IN GENERAL SHOW ANTIDEPRESSANTS TO BE EFFECTIVE.



SOME ANTIDEPRESSANTS HAVE BEEN ASSOCIATED WITH INCREASED SUICIDAL THINKING IN YOUNG PEOPLE. ALL ANTIDEPRESSANTS HAVE COMMON SIDE-EFFECTS, SUCH AS HEADACHE, NAUSEA, FEELING DROWSY, OR SEXUAL PROBLEMS.

### WHAT ARE THEY?

Antidepressants are medicines that are used to treat depression. They can be prescribed only by a doctor (e.g. a GP or a psychiatrist). There are many different types of antidepressants. The group of antidepressants that are used the most are called selective serotonin reuptake inhibitors (SSRIs). There are also serotonin and noradrenaline reuptake inhibitors (SNRIs), the most common drug being *venlafaxine* (e.g. Efexor).

### HOW ARE THEY MEANT TO WORK?

Different types of antidepressants work in slightly different ways, but they all act on the chemical messaging process between nerve cells in the brain.

### DO THEY WORK?

There have been some studies comparing SSRI antidepressants to a placebo ('sugar pills' that do not contain the drug) in depressed adolescents aged 17 and younger. Reviews of these studies show that the only SSRI found to be effective in reducing symptoms of depression in this age group is *fluoxetine*. There has only been one brief study of the SNRI drug *venlafaxine*. This showed some benefit in depressed adolescents compared to a placebo.

There have been no specific studies that have looked at whether antidepressants are effective in depressed young adults aged 18 to 25 years. However, there is considerable research in adults aged over 18 years more generally that shows that antidepressants work for moderate to severe depression.

### More information

Examples of SSRIs are *sertraline* (Zoloft), *citalopram* (brand name Cipramil), *escitalopram* (Lexapro), *fluoxetine* (Prozac), *fluvoxamine* (Luvox) and *paroxetine* (Aropax).

While medication can be beneficial in treating moderate-severe depression, research has also found that it is most useful to combine medication with psychological therapy or 'talking' therapies.

### ARE THERE ANY RISKS?

There is a link between taking SSRIs and SNRIs and increased suicidal thinking and/or behaviour in young people. This link is particularly strong in adolescents, but also in young adults.

All antidepressants also have other common side-effects, which can include headache, nausea, feeling drowsy, sleep changes or sexual problems (e.g. low sex drive). Some of these side-effects last for only a short time. Some drugs have worse side-effects than others. Overall, SSRIs appear to have fewer side-effects than other types of antidepressants.

### RECOMMENDATION

No antidepressants are approved by the Therapeutic Goods Administration in Australia for treating depression in children and adolescents under 18 years. However, doctors are still allowed to prescribe them if they believe that they will be beneficial for the young person. The SSRI antidepressant for which there is the strongest evidence of benefit in adolescents is *fluoxetine* (Prozac). This is recommended only for cases of moderate to severe depression and should be combined with psychological therapies.

There have been no studies of antidepressants in young adults. However, there is a lot of research to show that antidepressants are effective in adults with moderate to severe depression. In the absence of any research in young adults, it is fair to assume that antidepressants would also work in young adults with moderate or severe depression, but specific studies in this age group must be carried out.

There has been a lot of debate about giving antidepressants to young people, due to suicide-related safety concerns. For any young person who does take an antidepressant, a doctor should check – ideally, every week in the early stages of treatment – if this intervention is helping and whether there are any side-effects or signs of suicidal thinking or behaviour. This is especially important in the first four weeks of starting on medication.

Regardless of age, antidepressant drugs are not recommended for mild depression. Instead, psychological therapies are recommended as the first type of treatment. Furthermore, while antidepressant medication can be beneficial in treating moderate to severe depression among young people, research suggests that it is best to combine this with psychological therapy or 'talking' therapies.

## Anti-psychotic drugs

(aka 'major tranquilisers')

### Evidence rating



COMMON SIDE-EFFECTS INCLUDE WEIGHT GAIN, DRY MOUTH, SEXUAL PROBLEMS AND MOVEMENT PROBLEMS IN THE LIMBS AND FACE.

### WHAT ARE THEY?

Anti-psychotics are usually used to treat psychotic disorders, such as schizophrenia. They have also been used for bipolar disorder, psychotic depression and for severe major depression that has not responded to other treatments. They are usually used as an 'add-on' treatment with an antidepressant drug for depression, rather than used on their own.

### HOW ARE THEY MEANT TO WORK?

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

### DO THEY WORK?

In one study, six adolescents with psychotic depression were given an anti-psychotic drug along with an antidepressant. This combination helped to reduce the psychotic symptoms more than the depression symptoms. A more recent study 'added on' an anti-psychotic drug to an antidepressant in 10 adolescents whose depression had not improved with the depression medication alone. In seven out of the 10 cases, the symptoms of depression improved.

### ARE THERE ANY RISKS?

Different anti-psychotics may produce different side-effects. Common side-effects include feeling sedated (drowsy or 'knocked out'), weight gain and dry mouth. Movement problems in the arms, legs and face can also occur depending on the type of anti-psychotic drug. Some side-effects may need to be checked regularly by a doctor.

### RECOMMENDATION

There are no good-quality studies on the use of anti-psychotic drugs for depression in young people. For young people with psychotic depression, there may be some benefit in combining an anti-psychotic with an antidepressant drug, as these help to reduce the psychotic symptoms, but more research is needed before this add-on approach can be recommended for treating psychotic depression.

## Electroconvulsive therapy (ECT)

(aka 'shock therapy')

### Evidence rating



ECT MAY CAUSE SHORT TERM SIDE-EFFECTS SUCH AS CONFUSION, PROBLEMS CONCENTRATING AND MEMORY LOSS.

### WHAT IS IT?

Generally, with ECT, electrical currents are passed through the brain to cause a seizure. The treatment is given under a general anaesthetic (i.e. the person is not awake). Usually, a series of ECT treatments is given over several weeks. ECT is most often used for very severe depression that has not responded to other treatments. It is also used where there is a risk of death from suicide or where the person cannot – or refuses to – eat or drink, or when the person is experiencing psychotic symptoms.

### HOW IS IT MEANT TO WORK?

It is not understood exactly how ECT works other than by stimulating parts of the brain.

### DOES IT WORK?

There have been a number of small case studies of ECT in young people with severe depression who have not benefited from other treatments. Most of the people in these studies experienced an improvement in their depression symptoms immediately after having ECT. However, there have not been any good-quality studies in which ECT has been compared to a control treatment in young people with severe depression.

### ARE THERE ANY RISKS?

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

### RECOMMENDATION

More high-quality research is needed to understand whether ECT is effective for young people with severe depression.

## Lithium

### Evidence rating



 THERE CAN BE SERIOUS SIDE-EFFECTS OF TOXIC LEVELS OF LITHIUM IN THE BLOOD, INCLUDING TREMOR AND CONVULSIONS, AND IN SOME CASES DEATH. PEOPLE WHO TAKE LITHIUM MUST HAVE THEIR BLOOD MONITORED BY A DOCTOR.

### WHAT IS IT?

Lithium is a drug that is used mainly to treat bipolar disorder (previously known as manic depression). Because it has been found to be effective for treating bipolar disorder, it has also been used to treat other types of depression.

### HOW IS IT MEANT TO WORK?

It is not clear how lithium works other than to act on chemical messengers in the brain.

### DOES IT WORK?

There have not been any studies that have looked at whether lithium is an effective treatment for depression in young people. There have been some studies where lithium has been added to an antidepressant drug in adolescents with severe depression. Symptoms of depression have been found to improve for some of the people in these studies. However, these studies were of low quality since there were no comparison groups.

### 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 seizures and in some cases death. People who take lithium must have their blood monitored to make sure the dose is at a safe level.

### RECOMMENDATION

Lithium has not been tested as a 'stand alone' treatment for depression in young people. There is limited evidence that adding lithium to an antidepressant might be useful in adolescents with severe depression, but more high-quality studies are needed.

## Transcranial magnetic stimulation (TMS)

### Evidence rating



 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 used mainly for people who have tried other treatments, but still have severe depression.

### HOW IS IT MEANT TO WORK?

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

### DOES IT WORK?

There have been several small studies where TMS has been used in adolescents with severe depression who haven't benefited from other treatments. In these studies, regular TMS was given over several weeks while the person continued with other treatments, such as medication or counselling. In two of these studies, symptoms of depression improved after TMS for most of the recipients (nine out of 10). In a third study, three out of nine adolescents benefitted from the TMS. While these results are promising, the studies were of low quality since there were no comparison (control) groups.

### ARE THERE ANY RISKS?

There is a small risk of seizure with TMS given the use of electric currents. Headaches have also been reported in studies. The effects of TMS on memory, attention and concentration are not yet known.

### RECOMMENDATION

More high-quality studies are needed before TMS can be recommended for depression in young people.

# Psychological interventions

## Art therapy

Evidence rating



### WHAT IS IT?

Art therapy encourages people to express their feelings through creating artwork with paints, chalk or pencils. In art therapy, the person works one-on-one with a professional, who combines other techniques with drawing, painting or other types of artwork. Often the focus is on the emotional qualities of the art.

### HOW IS IT MEANT TO WORK?

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

### DOES IT WORK?

Art therapy has not yet been tested properly in any well-designed studies with young people. There has only been one case study of this therapy with a 14-year-old girl with severe depression and post-traumatic stress disorder (PTSD). After 48 sessions of art therapy, the girl felt less depressed.

A larger study looked at the effectiveness of art *groups* with 39 depressed and suicidal adolescents. All participants were in hospital at the time. They were assigned to either two art group sessions or two sessions of recreational time (including time in the gym). Both groups also received other treatment as usual within the hospital. The results showed depression improved in both groups.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough evidence yet to say whether art therapy works for depression in young people.

## Behaviour therapy / Behavioural activation

### Evidence rating



IN 14–17 YEAR OLDS



IN 18–25 YEAR OLDS

### WHAT IS IT?

Behaviour therapy, also called behavioural activation, is a major part of cognitive behaviour therapy (see opposite). However, it is different to CBT because it focuses on increasing people's levels of activity and pleasure in their lives. Unlike CBT, it does not focus on changing the person's beliefs and attitudes. Behaviour therapy can be done with individuals or groups and generally lasts between eight to 16 sessions.

### HOW IS IT MEANT TO WORK?

Behaviour therapy aims to teach people who are depressed how to become more active. This often involves doing activities that are rewarding, either because they are pleasant (such as spending time with good friends or engaged in hobbies) or give a sense of satisfaction or achievement (e.g. a feeling of a job well done). This helps to change patterns of withdrawal and inactivity that can make depression worse and replace them with rewarding and enjoyable experiences that reduce depression.

### DOES IT WORK?

There has been several good quality studies that have examined behaviour therapy in young adults. These studies show consistently that behaviour therapy helps to reduce depressive symptoms compared to no treatment. A lot of research has also compared behaviour therapy to cognitive therapy. Across these studies behaviour therapy appears to be less effective than cognitive therapy.

There has been less research on behaviour therapy in adolescents. Only three case studies have been done, involving either one, three or six adolescents. These studies have all found that symptoms of depression improve, usually after many sessions of behaviour therapy (e.g. 20 or more).

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

Behaviour therapy is an effective treatment for depression in young adults. More high-quality studies are needed to determine if behaviour therapy also works for depressed adolescents.

## Cognitive behaviour therapy (CBT)

### Evidence rating



IN 14–17 YEAR OLDS



IN 18–25 YEAR OLDS

THERE ARE NO STUDIES IN THIS SPECIFIC AGE GROUP, BUT MANY STUDIES IN ADULTS IN GENERAL SHOW CBT TO BE EFFECTIVE.

### WHAT IS IT?

CBT is one of the most common treatments for depression. In CBT, the person works with a professional to look at how his/her patterns of thinking (cognition) and acting (behaviour) are making him/her feel depressed, or are keeping the person from recovering from depression. CBT is a combination of two older types of therapy, cognitive therapy and behaviour therapy. The focus on each part will vary with professionals. CBT can be delivered one-on-one with a professional or in groups. Treatment length can vary, but is usually between four to 24 weekly sessions.

### HOW IS IT MEANT TO WORK?

CBT is thought to work by helping people to recognise patterns in their thinking and behaviour that contribute to depression. For example, depressed people may automatically create negative thoughts about any situation. In CBT, the person works to change unhelpful patterns of thinking to more realistic, helpful and problem-solving thinking. Also, since depressed people often stop doing things that they previously enjoyed, CBT can help to increase interest in activities that give them pleasure or a sense of achievement. This is the 'behaviour' part of CBT. When people engage in helpful thinking and enjoyable activities, their mood is expected to improve.

### What's an example of 'automatic negative thinking'?

Imagine if you passed your friend X in the street and X didn't acknowledge you. An automatic negative thought would be "X hates me". An alternative, more helpful thought might be "perhaps X didn't see me" or "X looks really pre-occupied – I hope they're OK".

*continued overleaf...*

## Cognitive behaviour therapy (CBT) (continued)

### DOES IT WORK?

A review of 11 high-quality studies of CBT for depressed adolescents showed that CBT is more effective than no treatment (e.g. being on a waiting list), as well as other 'active' treatments, such as relaxation training or life skills training. On average, the treatments in these studies involved 17 sessions. CBT was effective both as a group treatment and as a one-on-one treatment with a professional. It has been shown to work for adolescents with mild, moderate and severe depression.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is a lot of evidence that CBT is an effective treatment for depression in adolescents. There have not been any studies of CBT in young adults aged 18 to 25, but a large amount of research shows that CBT is effective in adults in general.

## Computer or internet treatments (professionally guided)

Evidence rating



### WHAT ARE THEY?

Computer assisted therapies use computer technology to deliver treatments, usually via the internet. Sometimes these approaches are also supported by a professional who helps the person apply what they are learning to their life. The professional communicates with the person doing the computer therapy over the phone, or by text, instant messaging or email. Just about all the computer assisted therapy programs are based on cognitive behaviour therapy (CBT).

There are also computer programs designed to target problems in thinking that can be associated with depression, like memory problems.

### HOW ARE THEY MEANT TO WORK?

The computer or web programs teach people the skills of CBT, which helps them to identify and change patterns of thinking and behaviour that might be keeping them from overcoming their depression (see cognitive behaviour therapy previous page). Computer-based learning is seen as a good way to make this therapy more widely available at low cost to people than would otherwise be possible if everyone had to see a professional face to face.

### DO THEY WORK?

Only one study has tested a self-completed, computer-based treatment with 31 depressed young adults. Participants did the computer therapy (guided by a professional), received antidepressants, or used both treatments. The computer program used games to target problems in thinking that sometimes occur with depression, including poor memory and difficulty paying attention. The computer program was used for two, 30-minute sessions a week until the depression improved to a certain level. The results showed that depression in all three groups improved. However, people in the computerised cognitive behaviour therapy (CCBT) and the combined treatment groups appeared to do better in keeping up these improvements over time.

## Creative play (aka 'play therapy')

Evidence rating



Another study tested CCBT in 23 depressed adolescents who did the sessions at their local mental health clinic under the supervision of a professional. The 'stress busters' course was done over eight weeks. The results showed that after completing the course, participants' depression symptoms were much lower. These improvements were still evident three months later, however, this was a low-quality study since there was no comparison group.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough good-quality evidence yet to say whether professionally-guided computer or internet treatments (including CCBT) work.

### WHAT IS IT?

Creative play is a type of therapy usually used with children aged three to 11 years old. It provides a way for children to express their experiences and feelings through play. Children can show their inner feelings through the toys and art materials they choose to play with and how they play. As children mature, they rely less on play as a way to express themselves. As a result, play therapy is not typically used with adolescents or young adults.

### HOW IS IT MEANT TO WORK?

Creative play is based on the belief that play is the child's natural way to express him/herself. Children understand their world, express thoughts and feelings, and develop social skills through play. Creative play provides a way for children to express their feelings, explore relationships and communicate their experiences and their wishes. It is believed to help children as they often have difficulty expressing their feelings in words or saying how experiences have affected them.

### DOES IT WORK?

There has been one high-quality study that compared group-based creative play to interpersonal therapy (IPT) or no treatment in depressed adolescents. These adolescents were all survivors of war in the African country Uganda and had experienced high levels of violence. The results showed that IPT was effective in reducing depressive symptoms. However, there was no difference in depression between the group that received creative play and those who received no treatment.

### ARE THERE ANY RISKS?

There are no known risks, however creative play therapy may not be acceptable to many adolescents, as it may be regarded as 'childish' and developmentally inappropriate.

### RECOMMENDATION

There is not enough evidence yet to say whether creative play works for depression in adolescents. The only study to date suggests it may not be helpful.

## Dance and movement therapy (DMT)

Evidence rating



### WHAT IS IT?

DMT combines expressive dancing with more common psychological treatments for depression, such as talking about the person's life difficulties. It can be delivered in a group or individual therapy. A DMT session usually involves a warm-up and a period of expressive dancing or movement. This is followed by talking about feelings and thoughts about the experience and how it relates to the person's life situation.

### HOW IS IT MEANT TO WORK?

DMT is based on the idea that the body and mind work together. It is thought that a change in the way someone moves will have an effect on his/her patterns of feeling and thinking. DMT also assumes that dancing and movement may help to improve the relationship between the person and the professional and may help the person to express feelings of which he/she is not aware. Learning to move in new ways may help people to discover new ways of expressing themselves and new ways to solve problems.

### DOES IT WORK?

DMT has only been tested in one good-quality study with adolescent girls. Forty adolescents took either 12 weeks of DMT or were placed on a waiting list. The results showed that DMT was better at reducing symptoms of depression than no treatment.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

Currently, there is not enough evidence yet to say whether DMT is an effective therapy for depression in young people.

## Eye movement desensitization and reprocessing (EMDR)

Evidence rating



### WHAT IS IT?

EMDR was developed to treat symptoms resulting from disturbing or traumatic experiences. It is most commonly used as a treatment for post-traumatic stress disorder (PTSD). It involves recalling traumatic life experiences for short periods of time (15–30 seconds), while at the same time moving the eyes back and forth. Sometimes another task, such as hand tapping or listening to sounds, 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 traumatic memories. Rather they simply help the person to confront his/her disturbing memories (see behaviour therapy; page 31), which is really responsible for the improvements.

### DOES IT WORK?

There has only been one study that used EMDR to treat depression in two adolescents. In both cases, the adolescents had experienced stressful life events (but not trauma), which was thought to have led to the development of the depression. After three to seven sessions of EMDR that focused on the stressful memories, the pairs' depression symptoms had reduced to the point where they were no longer depressed.

### ARE THERE ANY RISKS?

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

### RECOMMENDATION

There is not enough evidence as to whether EMDR is effective for depression in young people. It is also not clear whether EMDR would work for people who have not experienced stressful or traumatic events associated with the development of their depression.

## Family therapy

### Evidence rating



IN 14–17 YEAR OLDS

### WHAT IS IT?

In family therapy, family relationships are seen as an important factor in depression. Usually, the whole family – or at least some family members – will attend treatment with a professional, not just the family member who has depression. The professional tries to help all family members change how they communicate so that their relationships are more supportive and there is less conflict. Family therapy is most often used with children or adolescents, rather than young adults.

### More information

In family therapy, no one person is seen as “the problem”.

The professional focuses on looking at why the problem keeps on happening, rather than on what caused the problem or who is to blame.

### HOW IS IT MEANT TO WORK?

Family therapists believe that involving the family in the solution to a problem is the most helpful approach. This is based on the idea that relationships play a large role in how people feel about themselves. When family relationships are supportive and honest, this will often help to resolve problems and improve the mood of family members.

### DOES IT WORK?

There have been four good-quality studies of family therapy for depression in adolescents. One study of 107 adolescents compared family therapy, cognitive behaviour therapy (CBT) and supportive therapy. Each therapy was provided for between 12 and 16 weeks. Family therapy was less effective than CBT in the short term (i.e. at the end of the study), but just as effective in the long term (i.e. two years later). In the second study, 32 depressed adolescents received family therapy or were placed on a waiting list. The results showed that family therapy was more effective than no treatment. Another study by the same researchers then randomly assigned 66 depressed adolescents to three months of family therapy or treatment-as-usual. Family therapy was better than standard

treatment at reducing both depressive symptoms and suicidal thinking. The final study compared psychodynamic psychotherapy with family therapy in children and young adolescents. There were no differences between the groups at the end of nine months of treatment.

### ARE THERE ANY RISKS?

There are no known risks. When considering family therapy, it is important to make sure that the young person is happy to involve his/her family in the therapy. Putting pressure on a young person to involve his/her family may put the person off getting help.

### RECOMMENDATION

Family therapy is an effective treatment for depression in adolescents, but more large studies are needed before we can be more confident of its benefits. There are no studies of family therapy in young adults aged 18 to 25.

## Hypnosis (aka 'hypnotherapy')

### Evidence rating



HYPNOSIS SHOULD BE PROVIDED BY A QUALIFIED MENTAL HEALTH PROFESSIONAL WHO IS TRAINED IN THIS TECHNIQUE.

### WHAT IS IT?

Hypnosis involves a therapist (or hypnotherapist) helping a person to achieve a hypnotic state. This is a state of mind where the person under hypnosis experiences thoughts and images that seem very real. Time may pass more slowly or more quickly than usual when in this altered state of mind. People under hypnosis often notice things that are passing through their mind that they might not otherwise notice. They may also find that they are able to ignore or forget certain painful experiences, including physical pain. When people think about hypnosis, they may think about the therapist swinging a small pocket watch on a chain in front of a person's face. It is not always done this way, but the person does lie or sit back in a comfortable position.

### HOW IS IT MEANT TO WORK?

There are different types of hypnosis treatments for depression. However, all use hypnosis to help the person to make important changes. These can include changing ways of thinking, dealing with emotional conflicts, focusing on strengths or becoming more active. It is thought that these changes are easier to make when the person is in a hypnotic state.

### DOES IT WORK?

There are only two case studies of the use of hypnosis for depression in young adults. Both involved the use of cognitive treatments (see cognitive behaviour therapy; page 31) under several sessions of hypnosis (e.g. controlling negative thinking, or improving self-esteem and confidence). In both cases, the participants reported that their depression improved after hypnosis.

### ARE THERE ANY RISKS?

There are no known major risks. However, hypnosis needs to be delivered by a properly trained mental health professional. Otherwise, it is possible that some people might become distressed by strong feelings or mental images, or they might become dependent on their therapist.

### RECOMMENDATION

There is not enough evidence to say if hypnosis can be used to treat depression in young people.

## Interpersonal therapy (IPT)

### Evidence rating



IN 14–17 YEAR OLDS



IN 18–25 YEAR OLDS

THERE ARE NO STUDIES IN THIS SPECIFIC AGE GROUP, BUT STUDIES IN ADULTS IN GENERAL SHOW IPT TO BE EFFECTIVE.

### WHAT IS IT?

IPT is a type of counselling that focuses on problems in personal relationships and on building skills to deal with these problems. IPT is based on the idea that problems in personal relationships are an important part of the cause of depression. It is different from other types of therapy for depression because it focuses more on the person's personal relationships (e.g. with friends, intimate partners, teachers, parents, siblings) than what is going on in the person's mind (e.g. thoughts and feelings). IPT can be delivered through either group or individual sessions. When used with adolescents, IPT can involve just the young person, or his/her parent/s as well.

### What's an example of a problem 'role' in personal relationships?

Young people can face difficulties in 'role transition' – that's when a person's role changes and he/she doesn't know how to cope with it. Examples of role transitions include:

- dealing with growing independence from parents
- finishing/moving school
- first experience of a sexual relationship
- starting a job
- first experience of the death of someone.

### HOW IS IT MEANT TO WORK?

IPT is thought to work by helping people to recognise patterns in their relationships with other people that make them more vulnerable to depression. In IPT, the professional focuses on specific problems with personal relationships. For example, the professional may focus on grief over lost relationships, different expectations in relationships between the person taking IPT and others, giving up old roles to take on new ones, or difficulties getting along with other people. IPT aims to help people to improve their depression by helping them to overcome these problems.

## Problem solving therapy (PST)

Evidence rating



### DOES IT WORK?

There have been three good-quality studies of IPT among depressed adolescents. One study of 71 adolescents found that IPT was more effective in reducing depression symptoms than cognitive behaviour therapy (CBT) at the end of the treatment, although both groups were doing equally well at a three-month follow-up. Another study of 63 adolescents found IPT to be better than support from a school counsellor. Most studies have involved the depressed person and a professional working one-on-one, but there is one study that shows that group IPT is also effective.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There are several good-quality studies to show that IPT is an effective treatment for adolescent depression, but more studies in this age group would be beneficial. There have been no studies of IPT in young adults aged 18 to 25, however there is a lot of research to show that IPT is effective in adults in general.

### WHAT IS IT?

PST focuses on teaching people how to deal with problems better. This involves being taught by a professional to work through different stages in thinking about problems. These stages include:

- clearly identifying their problems
- thinking of different solutions for each problem
- choosing the best solution
- developing and carrying out a plan
- seeing if this solves the problem.

PST can be delivered through group or individual sessions.

### HOW IS IT MEANT TO WORK?

When people are depressed, they often feel that their problems can't be solved because they are too difficult or overwhelming. This will sometimes lead to people either ignoring their problems, or trying to solve them in unhelpful ways. PST helps people to break out of this pattern and discover new, more effective ways of dealing with their problems.

### DOES IT WORK?

There have been three good-quality studies of PST with depressed young people. In one study, 264 severely depressed and suicidal young adults received either group-based PST or standard hospital treatment. The results showed that both treatments were effective in reducing participants' depressive symptoms.

The second study compared individual PST to no treatment in 46 depressed adolescents and young adults. The group receiving PST improved more than the group that had no treatment. The improvements in the PST group appeared to be maintained until at least a year after treatment ended.

The third study compared social PST to supportive therapy in 18 severely depressed and suicidal young adults. Both treatments were group-based. The results showed that social PST was more effective than supportive therapy for reducing depression three months later.

*continued overleaf...*

## Problem solving therapy (PST) (continued)

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is emerging research that PST is an effective treatment for depression in young people, although more research is needed before PST can be considered a well-established treatment for depression.

## Psychodynamic psychotherapy (aka 'psychoanalysis')

Evidence rating



### WHAT IS IT?

Psychodynamic psychotherapy focuses on how unconscious patterns in people's minds (e.g. thoughts and feelings they are not aware of) may play a role in their problems. Short-term therapy usually takes less than a year, while long-term therapy can take more than a year. Long-term therapy is sometimes called psychoanalysis. It can involve lying on a couch while the professional listens to the person talk about whatever is going through his/her mind. However, more often the person and professional sit and talk to each other like in other types of counselling.

### HOW IS IT MEANT TO WORK?

This therapy focuses on the thoughts, images and feelings that pass through the person's mind. The professional's relationship with the person is also used to understand emotional problems of which he/she is not aware. The therapy is based on the belief that some people fail to have a good sense of self-worth after difficult life events. This can lead to depression. By making the person more aware of these conflicts, he/she can deal with them and resolve the issues that caused depression.

### DOES IT WORK?

There have been two good-quality studies of psychodynamic psychotherapy in young adolescents with depression. The first compared psychotherapy to a waiting-list control in a sample of 20 depressed children and adolescents. The results showed that 20 per cent of the treatment sample improved, compared to none of the control group. The other study compared psychodynamic psychotherapy with family therapy in children and young adolescents (less than 14 years old). There were no differences between the groups at the end of nine months treatment. A larger study examined the benefits of weekly or more intensive (e.g. multiple sessions per week) psychotherapy in 65 children and adolescents. It was reported that 75 per cent had no depressive symptoms at the end of treatment. However this is a low-quality study since no comparison group was included.

There has been one study of psychodynamic psychotherapy in young adults with depression. Eleven participants received therapy for 12 months (involving up to 80 individual sessions), however only small decreases in depressive symptoms were found at the end of treatment.

## Psychoeducation

Evidence rating



### WHAT IS IT?

Psychoeducation aims to help people understand their mental health problems and how they can better deal with their symptoms. Psychoeducation tends to be used along with other treatments (e.g. cognitive behaviour therapy) rather than on its own. It can take place either one-on-one with a professional or in group sessions. Family members can also be involved.

### HOW IS IT MEANT TO WORK?

Psychoeducation helps people to develop better knowledge about their depression. For example, learning about what affects their depression (e.g. what kind of things trigger it, what makes it worse, what kind of things can help). As well as providing information, the professional also works to support the person's strengths, resources and coping skills. This helps avoid a relapse (i.e. getting depressed again) and assists people to manage their own mental health in the long term.

### DOES IT WORK?

There has only been one good-quality study about psychoeducation for depression in young people. This study looked at whether family psychoeducation added to the benefits of standard treatment in 31 adolescents with moderate to severe depression. Standard treatment included individual or group support and counselling and/or medication. Family psychoeducation sessions took place in the person's home and all family members were involved. The results showed that adding family psychoeducation to standard treatment helped to improve depression. However, the biggest improvement was in the family relationships.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough evidence yet as to whether psychoeducation is effective for depression in young people.

### ARE THERE ANY RISKS?

No major risks are known. However, long-term therapy can be expensive and take a lot of time. It might be worth considering whether a short-term treatment may be just as effective.

### RECOMMENDATION

Two small, good-quality studies of psychodynamic psychotherapy suggest that this therapy is beneficial, but the people in these studies have mainly been children or very young adolescents (less than 14 years). There is not enough research on this treatment yet for depressed adolescents aged 14–17 or young adults for it to be recommended. More good-quality studies in these age groups are needed.

## Social skills training

Evidence rating



### WHAT IS IT?

Social skills training focuses on helping to improve social skills. The aim is to help people develop and maintain good relationships. These treatments focus on changing unhelpful social behaviours as well as unhelpful ways of thinking or feeling.

### What are some behaviours that social skills training might help improve?

- Feeling less shy when talking to others
- Feeling more confident or positive in social situations
- Not being angry or aggressive with others
- Understanding social cues (e.g. when people are bored or getting upset).

### HOW IS IT MEANT TO WORK?

Poor social skills and relationship problems with friends, family or teachers are thought to contribute to depression. This is because if people have poor social skills, they are likely to get negative feedback when they're with other people. This can lead to low self-esteem and a negative outlook on life. Teaching positive social skills makes it more likely that a person will have positive experiences in social situations.

### DOES IT WORK?

There have only been two studies of social skills training for treating depression in adolescents. In one study, 66 adolescents received either social skills training or supportive therapy. Supportive therapy was more effective than skills training at the end of the study, but nine months later, there was no difference between the groups. The other study compared social skills training to art group therapy. Social skills training was more effective than art therapy in reducing depression symptoms in males. There were no differences in depression symptoms for females in the two treatment groups.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

There is not enough evidence to show that social skills training is effective for depression in young people.

## Supportive therapy (aka 'supportive counselling')

Evidence rating



### WHAT IS IT?

Supportive therapy helps people to function better by giving personal support. In general, the professional does not ask the person to change his/her behaviour or thinking styles. Instead, the professional acts as a support person, allowing the person who is taking supportive therapy to reflect on his/her life situation in a setting where he/she feels accepted.

### HOW IS IT MEANT TO WORK?

Supportive therapy works on the theory that some people do best in an accepting, non-judgemental environment. This helps the person to cope with day-to-day problems and deal with issues that are hard to change. Getting support and acceptance from the professional can help people to cope better, even if they can't change some of the problems they're facing.

### DOES IT WORK?

Several studies have looked at supportive therapy for depression in young people. In one study, 107 adolescents received supportive therapy, cognitive behaviour therapy (CBT) or family therapy. Supportive therapy was less effective than CBT after three months of treatment, but two years later, both groups were doing equally well. Another study compared group-based supportive therapy and social problem solving therapy (PST) in 18 severely depressed young adults. Supportive therapy was less effective in reducing depression symptoms. A final study compared supportive therapy to social skills training in 66 depressed adolescents. Supportive therapy was more effective at the end of treatment, but nine months later, both groups were doing about the same.

### ARE THERE ANY RISKS?

There are no known risks.

### RECOMMENDATION

Supportive therapy may be helpful for depression, but it is likely to be less effective than a specific treatment such as CBT or interpersonal therapy (IPT).

# Interventions that are not routinely available

## Ketamine

(aka 'special K', 'kit kat', 'jet')

### Evidence rating



SERIOUS SIDE-EFFECTS, INCLUDING DEATH, MAY OCCUR FROM USING KETAMINE. THIS IS AN EXPERIMENTAL TREATMENT THAT IS NOT AVAILABLE FROM HEALTH PROFESSIONALS/DOCTORS.

### WHAT IS IT?

Ketamine is used mainly as an anaesthetic in vet practices to sedate animals. It is also an illegal street drug. Ketamine is a new, experimental approach for depression. When ketamine was used for depression in the one study, very low doses were injected.

### HOW IS IT MEANT TO WORK?

Ketamine affects brain chemicals that are different from those affected by antidepressant drugs. It is thought to work by blocking the brain chemical *glutamate* from sending its messages in the brain.

### DOES IT WORK?

One study tested a single dose of ketamine, given through an intravenous line (a drip) versus a dummy salt solution in 18 adults with severe or long-standing depression. Included in the study, was one 18-year-old whose depression symptoms improved more from taking the ketamine than from taking the dummy salt solution.

### ARE THERE ANY RISKS?

Used under medical supervision, ketamine is relatively safe. However, the side-effects of ketamine can be serious. These include changes to vision or hearing, feeling confused, high blood pressure, feeling 'high', dizziness, and increased interest in sex. Abuse of this drug can result in very serious health effects, including death.

### RECOMMENDATION

There is not enough research in young people to say whether ketamine is effective for depression. Much more work is also needed to explore the safety of this drug.

# Interventions reviewed but where no evidence was found

## Herbs, Vitamins and Minerals (complementary or self-help treatments)

5-hydroxy-L-tryptophan  
American ginseng (*Panax quinquefolius*)  
Ashwagandha (*Withania somnifera*)  
Astragalus (*Astragalus membranaceus*)  
Ayurvedic medicine  
Bach flower remedies (including Rescue Remedy)  
Basil (*Ocimum spp*)  
Berocca  
Biotin  
Black cohosh (*Actaea racemosa* or *Cimicifuga racemosa*)  
Borage (*Borago officinalis*)  
Brahmi (*Bacopa monniera*)  
Californian poppy (*Eschscholtzia californica*)  
Carnitine/Acetyl-L-Carnitine  
Catnip (*Nepeta cataria*)  
Cat's claw (*Uncaria tomentosa*)  
Chamomile (*Anthemis nobilis*)  
Chaste tree berry (*Vitex agnus castus*)  
Chinese medicinal mushrooms  
(*Reishi* or *Lingzhi*, *Ganoderma Lucidum*)  
Choline  
Chromium  
Clove (*Eugenia caryophyllata*)  
Coenzyme Q10  
Combined preparations (EMPowerplus – Truehope  
Nutritional Support Ltd)  
Cowslip (*Primula veris*)  
Damiana (*Turnera diffusa*)  
Dandelion (*Taraxacum officinale*)  
Euphystose  
Feldenkrais  
Flax seeds (linseed) (*Linum usitatissimum*)

Folate  
Foti-tieng (Chinese herbal tonic)  
Fragrance or perfume  
γ-aminobutyric acid (GABA)  
Ginger (*Zingiber officinale*)  
Ginkgo biloba  
Ginseng (*Panax ginseng*)  
Glutamine  
Gotu kola (*centelle asiatica*)  
Hawthorn (*Crataegus laevigata*)  
Hellerwork  
Hops (*Humulus lupulus*)  
Hyssop (*Hyssopus officinalis*)  
Inositol  
Kampo (Japanese herbal therapy)  
Kava (*Piper methysticum*)  
Korean ginseng  
Lavender  
Lecithin  
Lemon balm (*Melissa officinalis*)  
Lemongrass leaves (*Cymbrogon citrates*)  
Licorice (*Glycyrrhiza glabra*)  
Melatonin  
Milk thistle (*Silybum marianum*)  
Mindsoothe or Mindsoothe Jr (Native Remedies)  
Mistletoe (*Viscum album*)  
Motherwort (*Leonurus cardiaca*)  
Multivitamins  
Natural progesterone  
Nettles (*Urtica dioica*)  
Nicotinamide  
Oats (*Avena sativa*)  
Omega-3 fatty acids  
Painkillers/over-the-counter medicines

Para-aminobenzoic acid (PABA)  
Passionflower (*Passiflora incarnata*)  
Peppermint (*Mentha piperita*)  
Phenylalanine  
Potassium  
Purslane (*Portulaca oleracea*)  
Rehmannia (*Rehmannia glutinosa*)  
Rhodiola rosea  
Rosemary (*Rosmarinus officinalis*)  
Saffron  
Sage (*Salvia officinalis*)  
Schizandra (*Schizandra chinensis*)  
Sedariston  
Selenium  
Siberian ginseng (*Eleutherococcus senticosus*)  
Skullcap (*Scutellaria lateriflora*)  
Spirulina (*Arthrospira platenis*)  
St Ignatius bean (*Ignatia amara*)  
Suanzaorentang  
Taurine  
Tension Tamer tea  
Thyme (*Thymus vulgaris*)  
Tissue salts  
Tragerwork  
Tyrosine  
Valerian (*Valeriana officinalis*)  
Vervain (*Verbena officinalis*)  
Vitamins (B, C, D, E, K)  
Wild yam (*Dioscorea villosa*)  
Wood betony (*Stachys officinalis* or *Betonica officinalis*)  
Worry Free  
Yeast  
Zinc

### Medications

(prescribed by a doctor)

Anti-anxiety drugs  
Anti-glucocorticoid (AGC) drugs  
Oestrogen  
Stimulant drugs  
Testosterone

### Medical treatments

Vagus nerve stimulation (VNS)

### Physical treatments

Air ionization  
Craniosacral therapy or cranial osteopathy  
Hydrotherapy  
Kinesiology  
Osteopathy  
Reflexology  
Sleep deprivation  
Sleep hygiene

### Psychological and lifestyle treatments

Acceptance and commitment therapy (ACT)  
Acupuncture  
Adequate sleep  
Alexander technique  
Aromatherapy  
Autogenic training  
Balneotherapy or bath therapy  
Colour therapy, chromotherapy or colorology  
Crystal healing or charm stone  
Dolphins (swimming with)  
Gerson therapy  
Holiday or vacation  
Homeopathy  
Horticulture therapy  
Humour/humour therapy  
LeShan distance healing  
Meditation  
Mindfulness based cognitive therapy (MBCT)  
Music therapy  
Narrative therapy  
Neurolinguistic programming (NLP)  
Pets  
Pilates  
Pleasant activities  
Prayer  
Qigong  
Recreational dance  
Reiki  
Relationship therapy  
Reminiscence therapy  
Sex to relax  
Shopping

Singing

Tai chi

Traditional Chinese medicine

Yoga

### Dietary and other changes

Alcohol avoidance  
Alcohol for relaxation  
Avoiding certain food types (barley, rye, wheat, dairy foods)  
Caffeine avoidance  
Caffeine consumption  
Chocolate  
Ketogenic diet  
Marijuana avoidance/consumption  
Nicotine avoidance  
Smoking a cigarette/quitting smoking  
Sugar avoidance  
Carbohydrate rich/protein poor diet

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## Interventions that are not routinely available

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# Appendix

## What about treatment approaches that are not reviewed here, but where evidence exists for adults? A summary of the evidence for treatments in adults in general.

For full details of the following reviews, see Jorm AF, Allen NB, Morgan AJ, Ryan S and Purcell R. *A guide to what works for depression (2nd Edition)*, *beyondblue*. Melbourne: 2013. This booklet is available to download and order free from *beyondblue* at [www.beyondblue.org.au](http://www.beyondblue.org.au) or call 1300 22 4636.

## Complementary and lifestyle interventions

### 5-hydroxy-L-tryptophan (5-HTP)

Evidence rating



#### WHAT IS IT?

5-HTP is an amino acid. Amino acids are building blocks of proteins. 5-HTP is produced in the body from L-tryptophan and may also be purchased as a dietary supplement.

#### RECOMMENDATION

There is not enough good evidence to say whether 5-HTP works.

### Acupuncture

Evidence rating



#### WHAT IS IT?

Acupuncture involves inserting fine needles into specific points on the body. The needles can be rotated manually, or have an electric current applied to them. A laser beam can also be used instead of needles.

#### RECOMMENDATION

Good-quality studies of acupuncture have found mixed results. There is not enough high-quality evidence yet to say that acupuncture is an effective treatment for depression.

## Alcohol avoidance

### Evidence rating



IN PEOPLE WITH A DRINKING PROBLEM



IN PEOPLE WITHOUT A DRINKING PROBLEM



SUDDENLY STOPPING OR REDUCING ALCOHOL USE AFTER HEAVY, LONG-TERM USE CAN LEAD TO WITHDRAWAL SYMPTOMS, WHICH CAN BE LIFE THREATENING.

### WHAT IS IT?

Alcohol avoidance means reducing or stopping drinking alcohol. Alcohol is a typical depressant drug and being drunk may cause temporary depressive symptoms. Heavy drinking can also cause unpleasant life events, like job loss, which can lead to depression. For these reasons, it may be helpful to avoid drinking alcohol when depressed.

### RECOMMENDATION

Depression in people with a drinking problem may be improved by not drinking alcohol. There is not enough evidence to say whether avoiding alcohol is helpful for depression in people without an alcohol problem.

## Aromatherapy

### Evidence rating



### 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.

### RECOMMENDATION

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

## Autogenic training

### Evidence rating



### WHAT IS IT?

Autogenic training involves practising simple mental exercises in body awareness. This includes concentration on breathing, heartbeat, and warmth and heaviness of body parts.

### RECOMMENDATION

There is not enough good evidence to say whether autogenic training works.

## Ayurveda

### Evidence rating



### WHAT IS IT?

Ayurveda is the traditional healing system of India. Ayurveda translates as 'knowledge of life'. It aims to improve health by balancing the body, mind and spirit using diet, herbs, spices, meditation and exercise.

### RECOMMENDATION

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

## Bach flower remedies

### Evidence rating



### WHAT ARE THEY?

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

### RECOMMENDATION

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

## Borage

### Evidence rating



### WHAT IS IT?

Borage (*Borago officinalis* or *echium amoenum*) is a herb originating in Syria.

### RECOMMENDATION

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

## Caffeine consumption or avoidance

### Evidence rating



CONSUMPTION



AVOIDANCE

### WHAT IS IT?

Caffeine is a stimulant found in coffee, tea, cola drinks and chocolate. Some people believe that caffeine improves mood and energy, while others say that avoiding caffeine may be helpful for depression.

### RECOMMENDATION

There is no good evidence to say whether caffeine consumption or avoidance is helpful for depression.

## Carbohydrate-rich protein-poor meal

Evidence rating



### WHAT IS IT?

It has been proposed that a meal rich in carbohydrates, but low in protein lifts mood.

### RECOMMENDATION

There is not enough good evidence to say whether eating carbohydrate-rich, but protein-poor meals works for depression.

## Carnitine / Acetyl-L-Carnitine

Evidence rating



FOR DYSTHYMIA



FOR OTHER TYPES OF DEPRESSION

### WHAT IS IT?

Carnitine is a nutrient involved in energy metabolism. It is produced in the body and is available in food such as meat and dairy products or as a supplement. Acetyl-L-Carnitine (ALC) is a form of carnitine that enters the brain easily.

### RECOMMENDATION

There is some evidence on ALC to indicate that it may work for dysthymia.

## Chromium

Evidence rating



### WHAT IS IT?

Chromium is an essential trace mineral involved in carbohydrate, fat and protein metabolism. Chromium is available in food or as a supplement.

### RECOMMENDATION

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

## Craniosacral therapy

Evidence rating



### WHAT IS IT?

Craniosacral therapists apply gentle pressure to the head and back to improve the flow of spinal fluid.

### RECOMMENDATION

There is not enough good evidence to say whether craniosacral therapy works.

## Dolphins (swimming with)

Evidence rating



### WHAT IS IT?

It has been suggested that swimming with dolphins may be helpful for depression. Swimming with dolphins is usually only available through a tour operator in selected locations.

### RECOMMENDATION

There is not enough good evidence to say whether swimming with dolphins works.

## Folate

Evidence rating



AS AN ADDITION TO ANTIDEPRESSANTS



AS A TREATMENT ON ITS OWN

### WHAT IS IT?

Folate is a nutrient found in a variety of foods or in dietary supplements, usually as folic acid.

### RECOMMENDATION

Folate may be helpful for depression when taken with antidepressants. There is not enough good evidence to say whether folate works as a treatment on its own.

## Ginkgo biloba

Evidence rating



### WHAT IS IT?

Extracts from the leaves of the ginkgo biloba (maidenhair) tree are available in tablet form.

### RECOMMENDATION

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

## Glutamine

Evidence rating



### WHAT IS IT?

Glutamine is an amino acid (one of the building blocks of protein) and is found in foods high in protein. It is available as a supplement from health food shops.

### RECOMMENDATION

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

## Homeopathy

Evidence rating



### WHAT IS IT?

Homeopathy uses very small doses of various substances to stimulate self-healing. Treatments are based on people'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.

### RECOMMENDATION

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

## Humour / humour therapy

Evidence rating



### WHAT IS IT?

Humour could be used by people to help improve their depression, or as part of therapy provided by a professional.

### RECOMMENDATION

There is not enough good evidence to say whether using humour or humour therapy works for depression.

## Hydrotherapy

Evidence rating



### WHAT IS IT?

Hydrotherapy includes hot air and steam baths or saunas, wet packings, and various kinds of warm and cold baths.

### RECOMMENDATION

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

## Inositol

Evidence rating



### WHAT IS IT?

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

### RECOMMENDATION

There is not enough good evidence to say whether inositol works for depression.

## Kampo

Evidence rating



### 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.

### RECOMMENDATION

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

## Lavender

Evidence rating



### WHAT IS IT?

Lavender is a plant that is popular in herbal medicine. Essential oil extracts are obtained from the flowering tops.

### RECOMMENDATION

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

## LeShan distance healing

Evidence rating



### WHAT IS IT?

LeShan distance healing is a meditation technique designed to help the healing of another person's medical problems. It can be done either at a distance or in the presence of the person being healed. It is a skill that can be learned by people with no experience in healing or meditation.

### RECOMMENDATION

There is not enough good evidence to say whether LeShan distance healing works or not.

## Marijuana

Evidence rating



USING MARIJUANA HEAVILY CAN INCREASE RISK OF PSYCHOSIS (I.E. LOSING CONTACT WITH REALITY).

### WHAT IS IT?

Marijuana is a mixture of dried shredded leaves, stems, seeds and flowers of the hemp plant (*Cannabis sativa*). Cannabis refers to marijuana and other preparations made from the same plant, such as hashish. The active ingredient in marijuana is the chemical THC.

### RECOMMENDATION

There is no evidence that marijuana helps depression. Heavy use can increase the risk of developing more serious mental illnesses.

## Meditation

Evidence rating



### WHAT IS IT?

There are many different types of meditation. However, they all train people to focus their attention and awareness. Some types involve focusing attention on a silently repeated word or on breathing. Others involve observing thoughts without judgment. Meditation can be done for spiritual or religious reasons, but this is not always the case.

### RECOMMENDATION

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

## Nature-assisted therapy

Evidence rating



### WHAT IS IT?

Nature-assisted therapy is the use of plants, natural materials, and the outdoor environment to improve health. Nature-assisted therapy covers a variety of activities. These include therapeutic horticulture (gardening and plant-related activities to improve wellbeing) and wilderness or outdoor adventure excursions.

### RECOMMENDATION

There is not enough good evidence to say whether nature-assisted therapy works.

## Omega-3 fatty acids (fish oil)

Evidence rating



CONTAINS MAINLY EPA



CONTAINS MAINLY DHA

### WHAT ARE THEY?

Omega-3 fatty acids are types of polyunsaturated fats. The two main types are eicosapentaenoic 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. There is some research linking lack of Omega-3 in the diet to depression.

### RECOMMENDATION

Omega-3 supplements may work if they contain mainly EPA rather than DHA. However, more research is needed to be sure.

Countries where a lot of fish is eaten tend to have lower rates of depression. As Omega-3 consumption has reduced in the typical diet in Western countries, rates of depression have also increased.

Lower concentrations of Omega-3 have been found in the blood of depressed people.

Omega-3 supplements containing EPA and DHA are available from health food shops and pharmacies.

## Painkillers

Evidence rating



### WHAT ARE THEY?

Painkillers are sold over-the-counter for the temporary relief of pain. They include aspirin, paracetamol and ibuprofen. Some people use these painkillers to help with depression.

### RECOMMENDATION

There is no good evidence on whether painkillers help depression.

## Pets

Evidence rating



### WHAT ARE THEY?

Many people report positive effects of interacting with their pets. Pets can also be used by professional therapists as part of their treatment.

### RECOMMENDATION

There is not enough good evidence to say whether interacting with pets works.

## Phenylalanine

Evidence rating



### WHAT IS IT?

Phenylalanine is an amino acid. Amino acids are the building blocks of protein. It cannot be made in the body and must be included in the diet. Supplements are available through health food shops.

### RECOMMENDATION

It is unclear whether phenylalanine works for depression. Better scientific evidence is needed.

## Prayer

Evidence rating



### WHAT IS IT?

Prayer is a means by which believers attempt to communicate with the 'higher being'. Prayer has traditionally been used in times of illness and is often used by people to help cope with mental health problems. People can pray for themselves or to ask for healing for another person.

### RECOMMENDATION

There is not enough evidence to say whether or not prayer works for depression.

## Qigong

Evidence rating



### WHAT IS IT?

Qigong is a 3,000-year-old Chinese self-training method involving meditation, breathing exercises and body movements.

### RECOMMENDATION

There is some preliminary evidence that qigong might help depression in older people. However, more evidence is needed to confirm this. There is no evidence on whether or not it works with other age groups.

## Recreational dancing

Evidence rating



### WHAT IS IT?

Dancing of any type can be used to improve mood.

### RECOMMENDATION

More evidence is needed to know whether dancing helps depression.

## Reiki

### Evidence rating



### WHAT IS IT?

Reiki (pronounced 'ray-key') is a form of energy healing that started in Japan. A session of reiki involves a practitioner lightly laying his/her hands or placing them a few centimetres away from parts of the person's body for three to five minutes per position. Distance reiki, where the practitioner can work without being physically present with the recipient, is available with further training.

### RECOMMENDATION

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

## Rhodiola rosea (Golden root)

### Evidence rating



### WHAT IS IT?

*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'.

### RECOMMENDATION

While the initial evidence looks promising, more studies are needed to confirm that it works.

## Saffron

### Evidence rating



### WHAT IS IT?

Saffron is the world's most expensive spice, made from the stigma of the flower of the plant *Crocus sativus*. Saffron is used to treat depression in Persian traditional medicine. Both the stigma and the petal (which is much cheaper) have been used for the treatment of depression.

### RECOMMENDATION

Saffron appears to work, but more needs to be known about the doses required.

## Schisandra

### Evidence rating



### WHAT IS IT?

Schisandra (*Schisandra chinensis*) is a berry originating in Siberia and China. A tincture (liquid extract) is made from the dried seeds.

### RECOMMENDATION

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

## Selenium

### Evidence rating



SELENIUM CAN BE TOXIC IN HIGH DOSES.

### WHAT IS IT?

Selenium is a mineral naturally present in the diet. Whole grains and meats are a particularly good source. Selenium is also available as a supplement.

### RECOMMENDATION

There is no good evidence on whether selenium supplements work.

## Sleep deprivation

### Evidence rating



FOR SHORT-TERM MOOD IMPROVEMENT



AS A LONG-TERM TREATMENT FOR DEPRESSION



PEOPLE WITH A HISTORY OF EPILEPSY SHOULD NOT USE SLEEP DEPRIVATION, BECAUSE IT CAN LEAD TO A SEIZURE. IN PEOPLE WITH BIPOLAR DISORDER, IT MAY ALSO LEAD TO MANIA.

### WHAT IS IT?

Sleep deprivation can be either total or partial:

- **Total sleep deprivation** involves staying awake for one whole night and the following day, without napping.
- **Partial sleep deprivation** involves sleeping during either the early or later part of the night, and staying awake for the other part.

### RECOMMENDATION

Sleep deprivation produces rapid improvement in many people. However, the effect generally does not last.

## Smoking cigarettes

### Evidence rating



 SMOKING IS A MAJOR RISK FACTOR FOR A RANGE OF CHRONIC PHYSICAL DISEASES, INCLUDING STROKE, HEART DISEASE AND CANCER. THESE PHYSICAL DISEASES IN TURN INCREASE THE RISK FOR DEPRESSION.

### WHAT IS IT?

People who are depressed are more likely to smoke cigarettes. One explanation for this is that they smoke to relieve symptoms of depression.

### RECOMMENDATION

Smoking may improve depressive symptoms in the short term. However, in the long term, it increases risk of a range of physical diseases that can in turn lead to depression.

## Sugar avoidance

### Evidence rating



### WHAT IS IT?

Eating refined sugar can provide a temporary increase in energy level and an improvement in mood. However, the longer-term effect is a decline in energy.

### RECOMMENDATION

While there is some promising evidence that sugar avoidance might help a minority of depressed people, further research is needed to confirm that this treatment works.

## Tai chi

### Evidence rating



### WHAT IS IT?

Tai chi is a type of moving meditation that originated in China as a martial art. It involves slow purposeful movements and focused breathing and attention.

### RECOMMENDATION

Although there is some promising evidence, more research is needed to say whether or not Tai chi works.

## Traditional Chinese herbal medicine

### Evidence rating



FREE AND EASY WANDERER PLUS



OTHER CHINESE HERBAL MEDICINES



CHINESE HERBS MAY INTERACT WITH WESTERN MEDICINES, SUCH AS WARFARIN, AND SOME SHOULD NOT BE USED DURING PREGNANCY. SOME CHINESE HERBS MAY BE TOXIC.

### WHAT IS IT?

Chinese herbal medicine uses combinations of herbs, minerals and animal products to treat disease. Combinations of herbs are usually tailored to individuals but there are some common herbs and combinations used to treat depression. Two of these are Free and Easy Wanderer Plus and Chaihu-Shugan-San. The Chinese Medicine Board of Australia regulates all Australian Chinese medicine practitioners.

### RECOMMENDATION

There is promising evidence for Free and Easy Wanderer Plus. More high-quality studies are needed to confirm its effectiveness when used in Australia. There is not enough good evidence to say whether other Chinese medicines work.

## Tyrosine

### Evidence rating



### WHAT IS IT?

Tyrosine is an amino acid, one of the building blocks of protein. It is found in food, but can also be taken as a supplement.

### RECOMMENDATION

Tyrosine is not effective as a treatment for depression.

## Vitamin B<sub>6</sub>

### Evidence rating



VERY HIGH DOSES (ABOVE 100mg PER DAY) OF VITAMIN B<sub>6</sub> CAN PRODUCE PAINFUL NERVE DAMAGE.

### WHAT IS IT?

Vitamin B<sub>6</sub> plays an important role in many processes in the body, including the brain. This vitamin is widely available in food, but can also be taken as supplements.

### RECOMMENDATION

Vitamin B<sub>6</sub> does not appear to work for depression in general. However, there is some promising evidence that it might help women whose depression is hormone related.

## Vitamin B<sub>12</sub>

### Evidence rating



HIGH DOSES OF VITAMIN B<sub>12</sub> CAN HAVE SIDE-EFFECTS, INCLUDING SKIN PROBLEMS AND DIARRHOEA.

### WHAT IS IT?

Vitamin B<sub>12</sub> is important to the working of many processes in the body, including the brain. It can be found in meat, milk and eggs. Supplements are also available.

### RECOMMENDATION

The limited evidence available does not show an effect of vitamin B<sub>12</sub> supplements on winter depression. There is no evidence on whether they work for other types of depression.

## Vitamin D

### Evidence rating



LARGE DOSES OF VITAMIN D CAN BE TOXIC AND LEAD TO IMPAIRED KIDNEY FUNCTIONING.

### WHAT IS IT?

Vitamin D is essential to certain body functions, particularly the growth and maintenance of bones. Few foods contain vitamin D. It is mainly made in the body by the action of sunlight on skin. It is also possible to buy vitamin D supplements. Vitamin D has been used as a treatment for winter depression.

### RECOMMENDATION

The evidence is promising that vitamin D may help winter depression, but more research is needed. There is no evidence that vitamin D helps other types of depression.

## Yoga

### Evidence rating



### 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.

### RECOMMENDATION

Yoga is a promising treatment for depression, but more good-quality research is needed.

## Young tissue extract

### Evidence rating



### WHAT IS IT?

Young tissue extract (YTE) is extracted from fertilized, partially incubated hen eggs. It is formed into a powder and sold as a supplement.

### RECOMMENDATION

There is not enough good evidence to say whether young tissue extract works.

## Zinc

### Evidence rating



TAKEN ALONE



IN COMBINATION WITH AN ANTIDEPRESSANT



TAKING ZINC AT HIGHER THAN RECOMMENDED DOSE (40mg A DAY FOR ADULTS) CAN BE TOXIC.

### WHAT IS IT?

Zinc is a mineral essential for life which is found in many foods. It can also be taken as a supplement.

### RECOMMENDATION

Zinc appears to work when taken with an antidepressant, but more good quality research is needed. There is no evidence that it is helpful on its own.

## Medical interventions

### Anti-anxiety drugs

#### Evidence rating



 LONG-TERM USE OF ANTI-ANXIETY DRUGS CAN CAUSE DEPENDENCE OR ADDICTION. COMMON SIDE-EFFECTS OF THESE DRUGS CAN INCLUDE SLEEPINESS, DIZZINESS, HEADACHE, AND IN SOME CASES, MEMORY LOSS.

#### WHAT ARE THEY?

Anti-anxiety drugs are used for severe anxiety. They may also be known as 'tranquillisers'. Because depression and anxiety often occur together, anti-anxiety drugs may also be used to treat depression. These drugs are usually used together with antidepressants, rather than on their own.

#### RECOMMENDATION

There is some evidence for using anti-anxiety drugs as a short-term treatment for depression, but not all drugs are effective. Combining an anti-anxiety drug with an antidepressant may also be helpful, but only in the short term. Anti-anxiety drugs should only be used for a short time because of the potential side-effects and risk of addiction.

### Anti-glucocorticoid (AGC) drugs

#### Evidence rating



 AGCs CAN CAUSE A NUMBER OF SIDE-EFFECTS, INCLUDING RASH, FATIGUE, CONSTIPATION, APPETITE CHANGES AND SLEEP PROBLEMS.

#### WHAT ARE THEY?

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

#### RECOMMENDATION

There is some evidence that AGCs may be helpful in the short term for people with depression. However more research is needed before the specific benefit of AGCs alone can be known.

### Oestrogen

#### Evidence rating



 OESTROGEN MAY INCREASE THE RISK OF CANCER OF THE UTERUS AND BREAST CANCER, AS WELL AS BLOOD CLOTS IN THE VEINS. IT CAN ALSO CAUSE A NUMBER OF OTHER PROBLEMS SUCH AS TENDER BREASTS AND VAGINAL BLEEDING.

#### WHAT IS IT?

Oestrogen is a hormone that occurs naturally in a woman's body. When used as a treatment, it is usually supplied as a tablet. It is also available in a skin patch, as a cream or gel, or injected or implanted just under the skin. Oestrogen is prescribed by a doctor.

#### RECOMMENDATION

More research is needed to work out whether oestrogen is an effective treatment for women with severe postnatal depression. Given its side-effects, oestrogen is not recommended as a main treatment for postnatal depression.

### Stimulant drugs

#### Evidence rating



 SIDE-EFFECTS MIGHT INCLUDE HEADACHE, DIFFICULTY SLEEPING, A LACK OF APPETITE AND NAUSEA. SOME STIMULANTS CAN ALSO BE HIGHLY ADDICTIVE, SO THERE ARE RISKS OF ABUSE OR DEPENDENCE IN SOME PEOPLE.

#### WHAT ARE THEY?

Stimulants help improve alertness and energy levels. These drugs are not used as a regular treatment for depression, but may be used to treat certain symptoms of depression, such as fatigue or lack of energy. Only a doctor can prescribe these drugs.

#### RECOMMENDATION

Stimulants may help to reduce certain symptoms of depression in the short term. However, there is no evidence of their longer-term benefits in treating depression.

## Testosterone

### Evidence rating



SIDE-EFFECTS CAN INCLUDE ACNE AND OILY SKIN. THERE ARE ALSO GENDER SPECIFIC SIDE-EFFECTS OF TESTOSTERONE. USE OF TESTOSTERONE THERAPY HAS ALSO BEEN ASSOCIATED WITH AN INCREASED RISK OF SOME FORMS OF CANCER.

### WHAT IS IT?

Testosterone is a naturally occurring hormone found in both males and females, although levels of testosterone are much higher in males. In males, it is the main sex hormone and is involved in sex drive (or libido) as well as muscle growth, strength, energy and stamina. When used to treat depression, testosterone replacement therapy can be provided as a patch that is worn on the skin, in tablet form or via injection. To be used properly and safely, testosterone treatments should be prescribed by a doctor.

### RECOMMENDATION

Testosterone may be helpful to men with low levels of this hormone, but more evidence is needed to support this finding. It does not appear to be effective for men with normal levels of testosterone who are depressed. There is no good-quality research on the effects of testosterone for women.

## Vagus nerve stimulation (VNS)

### Evidence rating



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 is mainly used for people with long-term, severe depression.

### RECOMMENDATION

On the evidence available, VNS does not appear to work, and given the risks and side-effects, it is not a recommended treatment.

# Psychological interventions

## Acceptance and commitment therapy (ACT)

### Evidence rating



### WHAT IS IT?

Acceptance and Commitment Therapy (ACT) is a type of Cognitive Behaviour Therapy (CBT). However, it is different to CBT because it does not teach a person how to change their thinking and behaviour. Rather, it teaches them to 'just notice' and accept their thoughts and feelings, especially unpleasant ones that they might normally avoid.

### RECOMMENDATION

ACT is a promising new approach to psychological therapy for people who are depressed. Although more work is needed, it might be worth trying for those who have not found more established treatments (like CBT, IPT or antidepressants) to be helpful.

## Animal assisted therapy

### Evidence rating



### WHAT IS IT?

Animal assisted therapy is a group of treatments where animals are used by a trained mental health professional in the therapy. Usually these are pets such as dogs and cats, but other animals like horses are also used. The interaction between the client and the animal is a focus of the treatment, and is thought to have benefits for the person's mood and well-being.

### RECOMMENDATION

Animal assisted therapy appears to work for depression. However, some larger studies should be done so we can be more confident of this.

## Mindfulness based cognitive therapy (MBCT)

### Evidence rating



### WHAT IS IT?

MBCT is used to prevent the return or relapse of depression in people who have recovered. It is generally delivered in groups. It involves learning a type of meditation called 'mindfulness meditation'. This type of meditation teaches people to focus on the present moment, just noticing whatever they are experiencing, including pleasant and unpleasant experiences, without trying to change them.

### RECOMMENDATION

MBCT appears to be effective at preventing the return of depression in people who have been depressed a number of times before. It is unclear whether it helps people who are currently depressed.

## Narrative therapy

### Evidence rating



### WHAT IS IT?

Narrative therapy 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 psychological therapy either alone, with their partner, or with their families.

### RECOMMENDATION

We do not yet know if narrative therapy is an effective treatment for depression.

## Neurolinguistic programming (NLP)

### Evidence rating



### WHAT IS IT?

NLP was developed in the 1970s based on observing people who were thought to be expert therapists. NLP assumes that if we can understand the way these experts use language when they are counselling people, then others can be effective therapists by using language in a similar way.

### RECOMMENDATION

There is no convincing scientific evidence that NLP is effective for depression.

## Relationship therapy

### Evidence rating



### WHAT IS IT?

Relationship therapy focuses on helping a person who is depressed by improving their relationship with their partner. Both members of the couple come for a series 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.

### RECOMMENDATION

Relationship therapy is an effective treatment for depression, which is probably best used when there are relationship problems along with depression.

## Reminiscence therapy

### Evidence rating



FOR OLDER PEOPLE



FOR OTHER AGE GROUPS

### WHAT IS IT?

Reminiscence therapy has been mainly used with older people with depression. It encourages people to remember and review memories of past events in their lives. Reminiscence therapy can be used in groups where people are encouraged to share memories with others. It can also be used in a more structured way, sometimes called 'life review'. This involves focusing on resolving conflicts and regrets linked with past experiences. The person can take a new perspective or use strategies to cope with thoughts about these events.

### RECOMMENDATION

Reminiscence therapy appears to be an effective approach to treating depression in older people.

## Interventions that are not routinely available

### Melatonin

#### Evidence rating



#### WHAT IS IT?

Melatonin is a hormone produced in the brain. It is involved in the body's sleep-wake cycle. Melatonin levels increase during night-time darkness. Melatonin supplements are not available in Australia, but can be brought in from overseas for personal use.

#### RECOMMENDATION

On current evidence, melatonin does not seem to help. Given that it might increase depression in high doses, it is not recommended.

### Negative air ionisation

#### Evidence rating



#### WHAT IS IT?

A negative air ioniser is a device that uses high voltage to electrically charge air particles. Breathing these negatively-charged particles is thought to improve depression.

#### RECOMMENDATION

Negative air ionisation appears to work, including for seasonal depression. However, the air ioniser needs to be of the right type.

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