

# What is Depression?

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It is normal to feel sad, low or down in response to life events, but these feelings usually pass. When someone experiences depression however, these feelings become more intense, last longer than a two-week period and can begin to really have an impact on that person's ability to function and cope in their daily life. Depression can affect the way a person thinks, feels and behaves.

The Australian Bureau of Statistics (ABS) reports one in 10 Australians (10.4%) have depression or feelings of depression (National Health Survey: First results 2017-18)<sup>1</sup>.

## What causes depression?

There is no simple answer to what causes depression. It is thought that a range of factors might contribute to someone developing depression. These factors might

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<sup>1</sup> <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4364.0.55.001> Accessed February 4, 2019.

include a genetic predisposition or vulnerability (family history), chemical changes in the brain, hormonal changes, ageing, major life changes or events, illness, stress, trauma and/or psychological factors (e.g. anxious/ irritable/ shy personality style, low self-esteem, perfectionism, sensitivity, negative thinking style etc.). It is important to remember that, just because someone has one or more of these risk factors, does not mean they will develop depression<sup>2</sup>.

Three important chemicals in the brain (called neurotransmitters) known to affect mood are Serotonin, Noradrenaline and Dopamine. In depression, it is thought the transmission of these chemicals might somehow be affected.<sup>3</sup>

## **What are the symptoms of depression?**

Knowing if someone is depressed can sometimes be difficult, especially if changes happen slowly or the person doesn't want to talk about what is happening for them. People who are depressed can experience both emotional and physical symptoms, including:

- Feeling very low in mood most of the day, nearly every day
- A loss of interest or pleasure in activities they usually enjoy
- Changes in sleep patterns (sleeping more or less than usual)
- Feeling exhausted or low in energy
- Changes in appetite or weight
- Feeling worthless or excessive guilt
- Reduced ability to concentrate, think or make decisions
- Changes in activity level (e.g. agitation, restlessness, slowing down of thought, reduction in physical movement etc.)
- Thoughts of death or suicide, or suicide attempts

When depressed, the way we think, the way we interpret what others say and do, and the messages we tell ourselves can all be affected. People might think things like:

- Why does this always happen to me
- I can't do it
- It's my fault
- Nothing will ever change, nothing ever works for me
- My problems are just too difficult to solve

If you are experiencing some of these symptoms, especially if they have lasted longer than two weeks, and you feel that your ability to function is affected, it is recommended you speak with your GP. Your GP can offer some advice and support, as well as link you

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<sup>2</sup> More information can be found at: Beyond Blue <https://www.beyondblue.org.au> and The Black Dog Institute <https://www.blackdoginstitute.org.au> Accessed February 4, 2019.

<sup>3</sup> Nutt, D.J (2008). Relationship of neurotransmitters to the symptoms of major depressive disorder. *Journal of Clinical Psychiatry* 69 Suppl E1:4-7.

Hasler G. (2010). Pathophysiology of depression: do we have any solid evidence of interest to clinicians? *World psychiatry: official journal of the World Psychiatric Association (WPA)*, 9(3), 155-61.

in with other health professionals who can help. There are a range of very effective treatments available to help with depression.

## **Staying well and looking after your wellbeing**

There are a range of things people can do to try and stay well and improve their sense of wellbeing. These include

### **1. Ensuring adequate sleep-**

Sleep has a restorative function both psychologically and physiologically. Ensuring adequate sleep is important for our general health. Sleep helps with restoring energy, flushing out toxins, repairing injuries or illness, growth, psychological wellbeing and mood, concentration, memory and work performance. Adults need between 7 - 9 hours' sleep each night (teenagers need between 8 - 10 hours). A lack of sleep can affect people in many ways including<sup>4</sup>

- Fatigue and daytime sleepiness
- Poor concentration, attention and memory problems
- Mood/ irritability
- Low motivation/ energy
- Impaired judgement and reaction times
- Headaches, gastrointestinal problems
- Poor physical coordination
- Lowered tolerance to pain<sup>5</sup>
- Increased risk of obesity (chronic sleep loss < 6 hours p/night)<sup>6</sup>

We know depression can significantly impact sleep leading to sleep issues like insomnia or oversleeping. Both a lack of sleep and oversleeping have been found to have negative impacts on both mental health and the health of the entire body.<sup>7</sup>

Good sleep habits (known as sleep hygiene) can make a positive difference to sleep quality. Strategies known to enhance sleep include:

- Establishing a good bedtime routine
- Waking at the same time *each* day
- Exercising (at least three hours before bedtime)
- Eating a healthy diet and avoiding caffeine at least six hours before bedtime (caffeine has a half-life of five to six hours meaning it takes our bodies that long to eliminate a half of the caffeine)

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<sup>4</sup> Medic, G., Wille, M., & Hemels, M. E. (2017). Short- and long-term health consequences of sleep disruption. *Nature and science of sleep*, 9, 151-161.

<sup>5</sup> Roehrs, T. A., Harris, E., Randall, S., & Roth, T. (2012). Pain sensitivity and recovery from mild chronic sleep loss. *Sleep*, 35(12), 1667-72.

<sup>6</sup> Beccuti, G., & Pannain, S. (2011). Sleep and obesity. *Current opinion in clinical nutrition and metabolic care*, 14(4), 402-12.

<sup>7</sup> Hickie, I. B., et al. (2013). "Manipulating the sleep-wake cycle and circadian rhythms to improve clinical management of major depression." *BMC Medicine* 11: 79.

- Not using electronic devices ideally for two hours before bedtime (as the blue light emitted delays the release of the sleep hormone Melatonin).

Further information on sleep hygiene can be found at the websites referenced in footnote<sup>8</sup>

## 2. Eating a healthy, balanced diet

There is an increasing amount of research and literature looking at the link between diet and depression. Growing evidence suggests there is a bidirectional relationship between mental health and diet- this means depression can lead to changes in appetite (reduced appetite or increased appetite) but that improvement in diet, guided by a Dietician, might also result in a reduction in reported depressive symptoms.<sup>9</sup>

The mechanism/s by which improvement in depressive symptoms occur following dietary improvement is still being investigated. However, gut microbiota and inflammatory and oxidative stress are thought to play a role.<sup>10</sup>

While traditional interventions (psychotherapy and antidepressant medication) have targeted the brain, there is a rapidly growing body of research that suggests what is happening in the gut (such as gut microbiota abnormalities) could be playing some role in depressive symptoms.<sup>11</sup> Gut microbiota live in our digestive system and especially in our intestinal tract and play a very important role in helping us digest our food and absorb and synthesize nutrients from that food. Gut microbiota however also have additional functions like helping to reduce inflammation, protect us against disease and regulate other systems in the body, including the brain. Gut microbiota interact with a number of regions in the brain. If gut microbiota become imbalanced, or there is an overgrowth of bacteria in the small intestine or increased intestinal permeability (known as leaky gut) this can lead to inflammation of the Central Nervous System and in turn areas like sleep, stress reactivity, mood, memory, brain function and pain sensitivity can be impacted.<sup>12</sup> It is thought that the more diverse bacteria in our gut is, the better we are able to fight off bacteria, viruses, or other microorganisms that can cause disease. Our normal gut microbiota can be disturbed by a range of factors including antibiotic treatment, stress and diet and when this happens it is thought susceptibility to depression might increase.

Gut microbiota diversity can be improved through probiotics (e.g. lactobacillus), prebiotics (e.g. omega fatty acids) and changes to diet (e.g. the Mediterranean diet

<sup>8</sup> <http://www.sleephealthfoundation.org.au/> Accessed February 4, 2019  
<https://www.sleepoz.org.au/resources/fact-sheets> Accessed February 4, 2019  
<https://www.cci.health.wa.gov.au/Resources/Looking-After-Yourself/Sleep> Accessed February 4, 2019

<sup>9</sup> Jacka, F.N., O'Neil, A., Opie, R.S., Itsiopoulos, C., Cotton, S.M., Mohebbi, M., Castle, D.J., Dash, S.R., Mihalopoulos, C., Chatterton, M.L., Brazionis, L., Dean, O.M., Hodge, A.M., & Berk, M. (2017). A randomised controlled trial of dietary improvement for adults with major depression (the 'SMILES' trial). *BMC medicine*, 15:23

<sup>10</sup> Liang, S., Wu, X., Hu, X., Wang, T., & Jin, F. (2018). Recognizing Depression from the Microbiota-Gut-Brain Axis. *International journal of molecular sciences*, 19(6), 1592.

<sup>11</sup> Tillisch, K., Mayer, E. A., Gupta, A., Gill, Z., Brazillies, R., Le Nevé, B., van Hylckama Vlieg, J., Guyonnet, D., Derrien, M., ... Labus, J. S. (2017). Brain Structure and Response to Emotional Stimuli as Related to Gut Microbial Profiles in Healthy Women. *Psychosomatic medicine*, 79(8), 905-913.

Clapp, M., Aurora, N., Herrera, L., Bhatia, M., Wilen, E., & Wakefield, S. (2017). Gut microbiota's effect on mental health: The gut-brain axis. *Clinics and practice*, 7(4), 987.

<sup>12</sup> Galland L. (2014). The gut microbiome and the brain. *Journal of medicinal food*, 17(12), 1261-72.

which promotes fibre-rich whole foods like fruits, vegetables, nuts, legumes, seeds, as well as fermented food like yogurt and is also low in saturated fats, refined carbohydrates, sugar and food additives).<sup>10</sup>

Diet quality should be considered part of the risk and protective factors for depression and as such should be considered as part of a holistic approach to maintaining well-being and to treating depression.

### **3. Exercising regularly**

Exercise has been shown to help improve sleep, increase energy levels, improve social interaction, distract people from their worries and improve self-esteem. Research shows people who exercise regularly experience less symptoms of stress, anxiety and depression than those who do not exercise regularly.<sup>13</sup>

The National Physical Activity Guidelines recommend people aged 18–64 years participate in 2.5- 5 hours of moderate intensity physical activity each week or 1 ¼ - 2.5 hours of vigorous intensity physical activity a week. Moderate intensity refers to physical activity that raises your heart rate, requires some effort but still allows you to talk while you are doing it (e.g. brisk walk, riding a bike, recreational swim, social tennis etc.). Vigorous intensity refers to physical activity that dramatically increases your heart and breathing rate and requires more effort making talking incredibly hard (e.g. sprinting, fast bike ride or riding up a hill, swimming laps, playing competitive sport).<sup>14</sup>

Research shows even a small increase of 15 minutes in daily activity can reduce mortality and cancer rates.<sup>15</sup> Regular physical activity can have significant health benefits including improved mental and social wellbeing, prevention of unhealthy weight gain and reduced risk for chronic diseases like Type 2 diabetes, heart disease, stroke and certain cancers.<sup>16</sup>

Theories identifying the mechanisms as to why exercise helps with depression are varied and range from the role of Thermogenics (increases in core body temperature following exercise result in feelings of relaxation and a reduction in muscle tension as core body temperature drops), distraction (exercise distracts attention away from worries and negative thoughts), sleep (helps regulate sleep which has a restorative function), endorphins (increased release of endorphins during exercise enhances positive mood and sense of wellbeing), self-efficacy (regular exercise leads to improved self-belief that a person feels in their ability to apply control over their own behaviour, motivation and social environment) and neurotransmitters (exercise results in increased levels of serotonin, dopamine and norepinephrine in the brain which have all

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<sup>13</sup> Martinsen, E. (2008). Physical activity in the prevention and treatment of anxiety and depression. *Nordic Journal Of Psychiatry*, 62(sup47), 25-29.

<sup>14</sup> [https://www.health.gov.au/internet/main/publishing.nsf/content/F01F92328EDADA5BCA257BF0001E720D/\\$File/FS-Adults-18-64-Years.pdf](https://www.health.gov.au/internet/main/publishing.nsf/content/F01F92328EDADA5BCA257BF0001E720D/$File/FS-Adults-18-64-Years.pdf) Accessed February 4, 2019.

<sup>15</sup> Tuso P. (2015). Strategies to Increase Physical Activity. *The Permanente journal*, 19(4), 84-8.

<sup>16</sup> <https://www.health.nsw.gov.au/health/publications/nsw-healthy-eating-strategy.pdf> Accessed February 4, 2019.

been shown to help improve mood).<sup>17</sup> It is likely exercise works because there are multiple mechanisms at play. Exercise has been shown to significantly help people who are experiencing mild to moderate levels of depression. For severe depression, exercise combined with other treatments has been shown to be effective.

#### **4. Maintaining social connections**

The Greek philosopher Aristotle wrote “man is by nature a social animal”. The ability of people to come together to support one another has historically helped humans to survive- individuals, for example, were better able to defend themselves from predators, and hunting for food was more successful, when done in groups.

In modern society, human connectedness continues to be a primary human need. Studies show humans thrive when they are engaged in positive relationships with others.<sup>18</sup> Increased mobility and movement away from family supports has been shown to place pressure on the ability of individuals to satisfy this need.<sup>19</sup> When social needs are not met, individuals can feel lonely. Loneliness is a subjective feeling, meaning some people can feel quite happy and satisfied living a fairly secluded existence whereas others can feel alone even though they appear to have a lot of people around them. Research shows perceived loneliness is closely linked to depression.<sup>18</sup>

Heavy use of social media platforms like Facebook and Instagram have been linked to feelings of social isolation. In a recent study, individuals aged 19-32 years who used social media for more than two hours a day reported twice the level of perceived social isolation compared with individuals who spent less than half an hour a day on social media platforms.<sup>20</sup> Another study found similar results when they compared Facebook to interaction with real-life friends. Face to face social interaction resulted in higher self-reported life satisfaction.<sup>21</sup> Quality human connection allows opportunity to feel listened to, supported, understood and valued and, in addition, can also provide a source of meaning and purpose in life.

When people become depressed they often feel like withdrawing from their friends and from social situations. This actually leads to an increased sense of isolation and worsening depressive symptoms. Connection with people can improve mental wellbeing and is considered to be a protective factor against depression. It is important to try and find opportunities to connect with others. For some people social anxiety can prove a major barrier to creating social connections- your GP can help and can link you in with support services aimed at increasing confidence socially.

### **Treatments for depression**

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<sup>17</sup> Craft, L. L., & Perna, F. M. (2004). The Benefits of Exercise for the Clinically Depressed. *Primary care companion to the Journal of clinical psychiatry*, 6(3), 104-111.

<sup>18</sup> Kawachi, I. & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health* 78(3):458-467.

<sup>19</sup> Buss, D.M. (2000). The evolution of happiness. *American Psychologist*, 55, 15-23.

<sup>20</sup> Primack, Brian A. et al. (2017). Social Media Use and Perceived Social Isolation Among Young Adults in the U.S. *American Journal of Preventive Medicine*, 53(1), 1 – 8.

<sup>21</sup> Shakya, H. & Christakis, N. (2017). Association of Facebook Use With Compromised Well-Being: A Longitudinal Study, *American Journal of Epidemiology*, 18(3), 203-211.

If you experience depression the following treatment approaches (alongside lifestyle changes listed above) have been found effective

1. **Psychological treatments**- there are a number of different psychological therapy approaches that have a lot of evidence showing they help with improving depression.

Cognitive Behaviour Therapy (CBT) is considered, at this point in time, to be the Gold Standard treatment approach for depression.<sup>22</sup> Face-to-face, online and guided self-help CBT have all been shown to be effective in treating depressive symptoms.<sup>23</sup> CBT looks at the way our thoughts (the messages we tell ourselves) and behaviours (the things we do) affect the way we feel. Working with a psychologist can help a person begin to identify unhelpful thoughts, beliefs and attitudes that might be contributing to, or strengthening, their depression. A psychologist can help a person learn to challenge these thoughts and learn to appraise situations in a more helpful, positive and realistic way. CBT also helps people identify and work to increase activities they find pleasurable and rewarding as well as to address patterns of avoidance, inactivity or withdrawal that might be perpetuating low mood.

Other psychological therapies that have strong clinical evidence for treatment of depression include Mindfulness Based Cognitive Therapy (MBCT) and Interpersonal Therapy (IPT).<sup>24</sup>

2. **Medical Treatments** – the main medical approach used to treat moderate to severe depression is antidepressant medication. This has been shown to be most effective when used in conjunction with psychological intervention<sup>25</sup>. A GP, paediatrician (for children) or psychiatrist can advise on suitability for medication.

If you, or someone you know, are experiencing depression the following services may be of assistance:

**Lifeline** – provides free counselling support for individuals experiencing a personal crisis with access to 24 hour crisis support and suicide prevention services.

P. 13 11 14 W. <https://www.lifeline.org.au/>

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<sup>22</sup> David, D., Cristea, I., & Hofmann, S. G. (2018). Why Cognitive Behavioral Therapy Is the Current Gold Standard of Psychotherapy. *Frontiers in psychiatry*, 9, 4.

<sup>23</sup> Linde, K., Rucker, G., Sigterman, K., Jamil, S., Meissner, K., Schneider, A., & Kriston, L. (2015). Comparative effectiveness of psychological treatments for depressive disorders in primary care: Network meta-analysis. *Family Practice*, 16, 103.

<sup>24</sup> Cuijpers, P., Geraedts, A. S., van Oppen, P., Andersson, G., Markowitz, J. C., & van Straten, A. (2011). Interpersonal psychotherapy for depression: A meta-analysis. *American Journal of Psychiatry*, 168, 581–592.

Lenz, S., Hall, J., & Smith, L. B. (2016). Meta-analysis of group mindfulness-based cognitive therapy for decreasing symptoms of acute depression. *The Journal for Specialists in Group Work*, 41, 44–70.

<sup>25</sup> Cuijpers, P., Sijbrandij, M., Koole, S. L., Andersson, G., Beekman, A. T., & Reynolds, C. F. (2014). Adding psychotherapy to antidepressant medication in depression and anxiety disorders: a meta-analysis. *World psychiatry : official journal of the World Psychiatric Association (WPA)*, 13(1), 56-67.

**Suicide call back service-** provides free counselling for suicide prevention and mental health via telephone, online or via video link for anyone affected by suicidal thoughts, 24/7.

P. 1300 659 467 W. <https://www.suicidecallbackservice.org.au/>

**Australian Psychological Society (APS) Find a Psychologist Service** – this service allows individuals to find a psychologist close to where they live who has experience working with issues being experienced.

W. <https://www.psychology.org.au/Find-a-Psychologist>

**Moodgym-** is a free online self-help program designed to teach cognitive behaviour therapy skills to people experiencing symptoms of depression and anxiety. It is funded by the Commonwealth Department of Health.

W. <https://moodgym.com.au/>