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Causes of depression

Fact Sheet

What this fact sheet covers:

- An overview of the main causes of depression:
  - Genetics
  - Biochemical factors
  - Effects of illness
  - Ageing brain
  - Gender issues
  - The role of stress and personality
- Key points to remember
- Where to get more information.

Introduction

Unlike with some other illnesses or disorders, there is no simple explanation as to what causes depression.

In general, depression is caused by a mixture of 'pressure' or 'strain', which can be mild or severe, combined with a vulnerability or predisposition to depression, which, too, can range from mild to severe.

For each type of depression, there are likely to be different mixtures of causes. For *psychotic* or *melancholic* depression, physical and biological factors are generally more relevant. By contrast, for *non-melancholic* depression, the role of personality and stressful life events are generally far more relevant.

Genetics

Contrary to the popular view that depression is due to life experiences and/or personality factors, there is strong evidence that genetics are a significant factor in a person's predisposition towards developing depression.

Depression can be inherited. The genetic risk of developing *clinical depression* is about 40%, with the remaining 60% being due to factors in the individual's own environment. Depression is unlikely to occur without life events, but the risk of developing depression as a result of some such event is strongly genetically determined.

Biochemical

Our knowledge of the human brain is still fairly limited, therefore we do not really know what actually happens in the brain to cause depression.

It is likely that with most instances of clinical depression, neurotransmitter function is disrupted. Neurotransmitters are chemicals that carry signals from one part of the brain to the next. There are many neurotransmitters, serving different purposes, however three important ones that affect a person's mood are serotonin, noradrenaline and dopamine.

In normal brain function, neurotransmitters jump from one nerve cell to the next, with the signal being as strong in the second and subsequent cells as it was in the first. However, in people who are depressed, the mood regulating neurotransmitters fail to function normally, so that the signal is either depleted or disrupted before passing to the next nerve cell.

In non-melancholic depression, it is likely that the transmission of serotonin is reduced or less active, whereas in people with melancholic and psychotic depression, the neurotransmitters noradrenaline and dopamine are more likely to have failed or be functioning abnormally.

Illness

In a simple sense, illness can lead to depression through the lowered mood that we can all experience when we are unwell, in pain or discomfort, confined, and less able to do the things we enjoy.

Illness can also change the body's functioning in a way that leads to depression. Even if the illness isn't making us feel down we still end up with a depression. For example:

- it is known that certain cancers can produce a depression – in these cases the person might be quite unaware that they have the disease
- certain medical conditions can lead to mania
- compromised immune functioning might play a part in the emergence of depression, although further research is needed to establish this link.

Ageing brain

As we age, our brain's capacity (in terms of general functioning) reduces, while certain neurotransmitters (which influence mood state) can become affected. Three reasons for these changes are worth mentioning in relation to depression.

- Some elderly people who are developing a dementia may at some stage (often early on) develop a severe depression for the first time. The depression is commonly of a *psychotic* or *melancholic* type and reflects disruption of circuits linking certain basal ganglia and frontal regions of the brain.
- Sometimes these changes merely reflect an ageing process, particularly in people who are vulnerable to this kind of 'wear and tear'.
- In others, however, high blood pressure or mini-strokes (often unnoticed by the individual and their family) may contribute. Good blood pressure control can reduce the chance of depression in some people with this problem.

Gender

Gender is a partial, but incomplete, explanation of why a person develops depression. Essentially, equal numbers of men and women develop melancholic depression. However, studies have shown that there is a much greater likelihood of women developing non-melancholic depression than men. There are a number of explanations for this, among them:

- women are more likely than men to 'internalising' stress, thereby placing them at greater risk of developing depression; additionally, women with unsatisfactory marriages or a number of young children are highly overrepresented among samples of depressed people, suggesting a sex-role component or a reduced inability to seek assistance or support.
- hormonal factors commencing in puberty may account for the increased chance in women of developing anxiety – a precursor to depression – or depression.

While sex hormone (or biological) differences may create a greater chance among women of developing depression, certain social factors still need to come into play before depression will be experienced.

Stress

It is important to recognise that nearly every individual can be stressed and depressed by certain events. Most people get over the stress or depression within days or weeks while others do not. Ways that stress can lead to depression include the following:

- Past and long-standing stresses can increase the chance of an individual developing depression in later years. An example is an abusive or uncaring parent, which may result in the child developing a low self-esteem and thus being vulnerable to develop depression in adult life.
- Most individuals who develop non-melancholic depression usually describe an important and understandable life event that occurred before the depression started.
- The events that are most likely to 'trigger' depression are ones where the individual's self-esteem is put at risk, compromised or devalued. For most adults, self-esteem is closely linked to an intimate relationship as well as in other important areas, such as a job. Thus, the break-up of a relationship or a marriage is a very common trigger for depression.
- Other individuals develop depression when they feel a sense of 'shame', such as when they feel that they have not lived up to their own or others' expectations, thus reducing their self-esteem.
- Our researchers have confirmed an important link between a genetic marker (involving the serotonin transporter) and risk to depression.

The impact of life events upon melancholic depression is not always clear. They may serve to trigger the depression – or rekindle it – rather than cause it. If you are depressed, it can be helpful to find out whether stress contributes to the depression either by:

- its severity – so that you feel under 'too much stress' – in which case generic stress management programs may be helpful; or
- its particular meaning to you: if a particular event or set of circumstances is likely to trigger stress in you and may do so repeatedly if you are re-exposed to those triggers, it can be helpful to seek sophisticated counselling or psychotherapy to identify what those triggers are and why they produce the stressful reaction.

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Personality

Our research has shown that people with the following personality types are more at risk of developing depression than others, those with:

1. high levels of anxiety, which can be experienced as an internalised 'anxious worrying' style or as a more externalised 'irritability'
2. shyness, expressed as 'social avoidance' and/or 'personal reserve'
3. self-criticism or low self-worth
4. interpersonal sensitivity
5. perfectionism
6. a 'self-focused' style

Those who are high on the first four factors are at distinctly greater risk to depression (especially *non-melancholic* depression).
'Perfectionism is somewhat protective against the onset of depression but, if depression occurs, it can promote longer episodes.
Those who have a high 'self-focused' style are likely to be at greater risk for brief depressive episodes only.
There appears to be little effect of temperament or personality on the development of *melancholic* depression.

Key points to remember

- There is no single cause for depression; rather it's a combination of pressure and a person's vulnerabilty to developing depression .
- Depression can be inherited.
- Other biological causes for depression can include illness, ageing and gender.
- Stress can trigger depression but understanding its particular meaning to the person is important.
- Certain temperament and personality styles pose risks for developing depression.

Where to get more information

- www.blackdoginstitute.org.au See our online Depression Education Program (DepEd) to learn more about the causes of depression. You can also assess yourself on our website anonymously in relation to each of the personality styles.
- More detailed information on at-risk personality styles is provided in *Dealing with Depression: A Common Sense Guide to Mood Disorders*, by Gordon Parker, published by Allen & Unwin, 2004.
- Wilhelm K, Siegel J, Finch A, Hadzi-Pavlovic D, Mitchell P, Parker G, Schofield PR. The long and the short of it: Associations between 5-HTT genotypes and coping with stress, J Psychosomatic Medicine(2007), 69, 614-620

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