Definition
Depression is characterised by persistent low mood and/or loss of pleasure in most activities and a range of associated emotional, cognitive, physical, and behavioural symptoms. ‘Subthreshold depressive symptoms’ is a term used to describe a situation where someone has some of the symptoms of depression but they do not meet the full criteria to diagnose depression. If subthreshold depressive symptoms last for more than two years, this is described as ‘persistent subthreshold depressive symptoms’.1

Anxiety is a symptom which is associated with a range of disorders such as generalised anxiety disorder (GAD), post-traumatic stress disorder (PTSD) and social anxiety disorder.2 Anxiety, although experienced by most people, does not usually develop into an anxiety disorder. Transient anxiety is normal, however when anxiety starts to affect daily life this indicates a problem.

Anxiety disorders are commonly unrecognised or undiagnosed and when anxiety disorders coexist with depression, the depressive episode may be recognised but the underlying anxiety disorder may be overlooked.3

Depression and anxiety or anxiety disorders are commonly experienced together in some form, but can also be experienced alone.4 There are several terms used to describe the combination of depression and anxiety, including mixed anxiety and depressive disorder and depressive anxiety.

Prevalence and incidence
Around one in twenty adults will experience depression. The prevalence of depression increases with increasing age.

Depression is recognised as the most common mental health condition in the elderly, and in England depression affects 22 percent of men and 28 percent of women aged 65 or over.5

Although underdiagnosed, it has been reported that anxiety disorders are the most prevalent psychiatric disorders5 with GAD being the most prevalent.2 For this reason for we will focus on GAD when considering anxiety for the rest of this page. For more information about other anxiety disorders, access the National Institute for Health and Care Excellence (NICE) quality standard Anxiety disorders [QS53]. The Introduction section links to a topic overview which references relevant NICE guidance.

Signs and symptoms
Signs and symptoms of depression include:

- feeling down, depressed or hopeless
- lack of enjoyment
- reluctance to engage in usual activities or leave the house
- tiredness and loss of energy
- difficulty concentrating
- insomnia or hypersomnia
- changes in weight and appetite
- loss of confidence
- inappropriate guilt
- feelings of worthlessness
- agitation
- suicidal thoughts or actions.8,9
To hear from a patient about his experience of clinical depression and its symptoms, visit the NHS page *Clinical depression: Lawrence’s story* and watch the video.

Symptoms of acute anxiety include:
- restlessness
- irritability
- tachycardia
- dry mouth
- nausea
- sweating.

The symptoms of acute anxiety may be experienced in those with GAD but for prolonged periods; there will likely also be emotional symptoms present.

To find out more about the symptoms of anxiety, visit the NHS page *Anxiety* and watch the video to hear a psychiatrist discuss its symptoms.

### Causes/risk factors

Risk factors for anxiety include psychosocial issues (e.g., unemployment), genetic factors, personality, previous head injury and chronic comorbidities such as diabetes, chronic obstructive pulmonary disease (COPD), cardiovascular disease and people with chronic pain syndromes. Factors that may increase the risk of depression include: history of depression, recent childbirth, adverse childhood experiences and medicines.

Approximately 25 percent of people with two or more chronic health problems are depressed compared to only three percent of people who are physically healthy. It has been reported that anxiety and depressive disorders are highly prevalent in the elderly and this often relates to other health conditions.

### Pathophysiology (mechanism of disease)

The pathophysiological mechanism of depression and anxiety disorders are not well understood. It is recognised that monoamines (serotonin, noradrenaline and dopamine) play a role in depression and its treatment, but it has become clear that there are other factors which likely also contribute. Similarly, for anxiety disorders the monoamines are thought to play a role, in addition to the inhibitory neurotransmitter gamma-aminobutyric acid (GABA).

For more information on the pathophysiology of depression, read the *Dialogues in Clinical Neuroscience* article *Pathophysiology of depression and mechanisms of treatment*.

For more information on the pathophysiology of anxiety disorders read the *International Journal of Pharmacy and Pharmaceutical Research* article *Understanding the pathophysiology and management of the anxiety disorders*.
Depression can exacerbate the pain, disability, and distress associated with a range of physical diseases. It also increases mortality in a range of comorbid conditions, including coronary artery disease. There is an increased risk of substance misuse with depression.

The risk of suicide in people who are depressed is four times higher compared with the general population. Depression also impairs normal functioning which can lead to employment problems, neglect of dependants, family problems and relationship break-ups. There are a number of complications associated with the use of antidepressants.  

With treatment, episodes of depression last about three to six months - more than 50 percent of people experiencing a major depressive episode recover within six months and 75 percent within a year.

The risk of recurrence is high and increases with every episode. Approximately 80 percent of people who receive psychiatric care for an episode of major depression will have at least one more episode and a median of four more in a lifetime. The prognosis is worse for those with psychotic features, prominent anxiety, personality disorders and severe symptoms.

GAD
Complications include serious disability and impaired quality of life, impaired social and occupational functioning, increased risk of major depression, social anxiety disorder, and alcohol and drug misuse.

Physical health problems are more common in people with GAD. These include chronic pain syndromes, asthma or chronic obstructive pulmonary disease, and inflammatory bowel disease.

Suicidal ideation and attempts are also more prevalent in people with GAD compared to the general population and this risk increases further in those who also suffer from major depression.

Diagnosis/detection
There are multiple different criteria which can be used to detect and diagnose both depression and anxiety disorders. These criteria explore a person’s feelings, assess whether there are any other symptoms present and determine how long they have been experiencing these symptoms.

For both depression and anxiety disorders there are multiple differential diagnoses. For GAD this includes other types of anxiety disorders, long-term health conditions such as cardiac and pulmonary disease, and medicine-induced anxiety and depression. For depression this includes grief, dementia, bipolar disorder, premenstrual dysphoric disorder, hypothyroidism, obstructive sleep apnoea syndrome and adverse reactions to substances (eg, carbon monoxide, medicines and illicit substances).

Depression
Current NICE guidance recommends the use of Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) criteria.

For more on the diagnosis of depression and the DSM-5 criteria, visit NICE clinical knowledge summary Depression – diagnosis - How do I diagnose depression? and NICE clinical guideline Depression in adults: recognition and management [CG90].

NICE also offers clinical guideline Depression in adults with a chronic physical health problem: recognition and management [CG91].
Similar to depression, NICE guidance recommends the use of DSM-IV for the assessment of GAD, but this has now been superseded by DSM-5. The GAD questionnaires GAD-2 and GAD-7 can be used to assess a person’s symptoms and determine the severity of GAD. For more on the diagnosis of GAD and its assessment with GAD-2 and GAD-7, visit NICE clinical knowledge summary Generalized anxiety disorder – diagnosis – When should I suspect generalized anxiety disorder?

Pharmacological treatment
One of the key aims of pharmacological treatment for both depression and GAD is to increase the levels of the monoamine neurotransmitters in the neuronal synapses of the brain – the junctions between nerves cells (neurons). Additionally, in GAD the inhibitory GABA neurotransmitter plays a role and is a target of pharmacological treatment.

To understand how this effect is achieved we need to understand the way neurotransmitters act at a neuronal synapse.

The image below shows a synapse.

In very simple terms, electrical signals travel down the axon of the presynaptic nerve towards the synaptic cleft. When they reach the synaptic cleft they cause synaptic vesicles, which contain neurotransmitters, to merge with the cell wall and release the neurotransmitters into the synaptic cleft. These neurotransmitters bind to receptors of the dendrite, which is part of the postsynaptic nerve, and cause another electrical signal to travel down this postsynaptic neuron, passing the message along the nervous system.

The neurotransmitters are then left in the synaptic cleft. At this point they may diffuse away, be taken back into the presynaptic nerve by transporter proteins in a process called reuptake, or degraded by enzymes.

Antidepressant medicines work to increase the amount of neurotransmitters that are left in the synaptic cleft.

There are three main classes of antidepressants:

Selective-serotonin reuptake inhibitors (SSRIs)
Fact sheet

Anxiety disorders and depression in older people

The primary action of the SSRIs is to inhibit the serotonin reuptake transporter and therefore inhibit the reuptake of serotonin into the presynaptic neuron, increasing the amount available to bind to the receptors of the postsynaptic neuron.

This group includes citalopram, escitalopram, fluoxetine, paroxetine and sertraline.\(^{18}\)

**Serotonin and noradrenaline reuptake inhibitors (SNRIs)**

The primary action of the SNRIs is to inhibit the serotonin and noradrenaline reuptake transporters and therefore inhibit the reuptake of serotonin and noradrenaline into the presynaptic neuron, increasing the amount available to bind to the receptors of the postsynaptic neuron.

The most commonly used medicines in this group are duloxetine and venlafaxine, which are also recommended for the treatment of GAD.\(^{18}\)

**Tricyclic and related antidepressants**

The primary action of the tricyclic and related antidepressants is similar to that of the SNRIs, ie, to inhibit serotonin and noradrenaline reuptake.

This group of antidepressants is now less commonly seen in practice. It includes amitriptyline, clomipramine, dosulepin, doxepin, trazodone, imipramine, lofepramine, and nortriptyline.\(^{18}\)

Doses of both SSRIs and tricyclic and related antidepressants are reduced in elderly patients, particularly at initiation. Refer to individual summary of product characteristics (SPCs) for starting doses, titration and maximum doses in the elderly.

**Monoamine-oxidase inhibitors (MAOIs)**

The primary action of MAOIs is to inhibit the activity of the monoamine oxidase enzyme which breaks down the monoamine oxidases, increasing the amount available to bind to the receptors of the postsynaptic neuron.

Again less commonly seen in practice, this group includes tranylcypromine, phenelzine, isocarboxazid, and moclobemide.\(^{18}\)

Antidepressants all have different risks and benefits. This is summarised in the *British National Formulary* (BNF) under the *Antidepressant drugs* treatment summary.

It should be noted that the use of antidepressants has been linked with suicidal thoughts and behaviour; children, young adults, and patients with a history of suicidal behaviour are particularly at risk.\(^{18}\)

**GAD and GABA**

To learn more about the action of GABA and its role in GAD, access the following *Neuropsychiatric Disease and Treatment* article *Anxiety disorders and GABA neurotransmission: a disturbance of modulation*.

**Medicines used in GAD that affect GABA include:**

Pregabalin which is a structural analogue of GABA.

Benzodiazepines which increase the action of GABA at the GABA receptors, although these should not be offered for the treatment of GAD in primary care, except as a short-term measure during crises.\(^{19}\)

More information about choice of treatments for depression and GAD can also be found in the following NICE guidelines and summaries:

- NICE clinical guideline *Depression in adults: recognition and management [CG90]*
Non-pharmacological treatment
The non-pharmacological treatment of depression is complex. It involves:

- managing comorbidities, such as alcohol and substance misuse, anxiety, psychotic symptoms, eating disorders and dementia
- the provision of information about depression and active monitoring with planned follow up
- offering appropriate psychological intervention such as individual guided self-help, computerised cognitive behavioural therapy (CCBT) or group-based peer support, or the more intensive group-based or individual cognitive behavioural therapy (CBT).

The management of GAD is similar, with a stepwise approach being recommended.

More information about the non-pharmacological management of depression and GAD can be found in NICE guidelines and summaries which are linked to above.

To hear older people talking about physiological interventions, watch the following video:

Age UK - Older people explain how talking treatments have helped them

For those who are suffering from a mental health crisis and are at risk of suicide, the crisis resolution and home treatment (CRHT) team may need to be contacted for an urgent assessment. More information about mental health crisis and the CHRT team can be found on Mind’s website:

- What is a mental health crisis?
Fact sheet
Anxiety disorders and depression in older people

- **What is a CRHT team?**

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**Patient support**
For general support the following websites offer information of depression and anxiety:
- *Mind*, the mental health charity
- NHS, *Generalised anxiety disorder in adults*
- *Clinical depression*
- NHS, *Moodzone, Depression support groups*

Support for older people can be found on the following websites:
- Royal College of Psychiatrists, *Depression in older adults*
- Age UK, *Depression and anxiety*

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**Further resources**
NICE quality standard *Mental wellbeing of older people in care homes [QS50]* ‘covers the mental wellbeing of older people (aged 65 and over) receiving care in care homes (including residential and nursing accommodation, day care and respite care). It focuses on support for people to improve their mental wellbeing so that they can stay as well and independent as possible. It describes high-quality care in priority areas for improvement.’

The following video from the NICE news article *New video to support mental wellbeing of older people in care homes quality standard* supports this quality standard.

Visit CPPE’s *Mental health* gateway page for further learning on mental health in general.

CPPE’s *Depression - focal point* can be accessed as distance learning and aims to help you to build your knowledge of the management of people with depression, and better understand the condition, its impact and approaches used to manage it.

An overview of all NICE products on depression, including any guidance, advice, NICE pathways and quality standards can be found on the NICE *Depression* page.
An overview of all NICE products on anxiety, including any guidance, advice, NICE pathways and quality standards can be found on the NICE Anxiety page.

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External websites
CPPE is not responsible for the content of any non-CPPE websites mentioned on this page or for the accuracy of any information to be found there.

All web links were accessed on 23 January 2020.

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References