# Depression

What causes it? How is it treated? How is it linked to stress?



#### About the author:

Private docent Dr. med. Dr. rer. nat. Martin E. Keck is a consultant psychiatrist, psychotherapist and neurologist and a neuroscientist. After training in Munich, Basel, London and Zürich, he worked from 1996 to 2005 at the Max Planck Institute for Psychiatry in Munich, where he ultimately headed up the "Depression and Anxiety" department. Support for his scientific work has come from various sources, including the "Bayerische Habilitationsförderpreis" (pos-doctoral scholarship awarded by the Bavarian State Ministry for Science, Research and the Arts). He is a member of the medical faculty of the Ludwig Maximilian University of Munich as well as numerous medical societies and is also a founder member of "Kompetenznetz Depression", the German Research Network on Depression. In addition to this, Martin Keck is a member of the board of the Swiss Society for Anxiety and Depression (SGAD), on the scientific advisory board of the Swiss Society for Drug Safety in Psychiatry (SGAMSP), a member of the Psychiatry, Neurology and Neurosurgery Ethics Committee for the canton of Zürich and the head of a working group at the Centre for Neurosciences Zürich. He has been Deputy Medical Director and Chief Physician of the longstanding Clienia Schlössli Private Clinic in Oetwil am See/Zürich in Switzerland since 2006.

# Introduction





Depressive disorders are amongst the most severe and important illnesses globally. Up to 20% of people are affected by them in their various forms. They affect a person's thoughts, feelings, body, and social relationships their entire being in effect. In spite of its enormous importance, depression often goes undetected or is not suitably treated. This results in great suffering and a lower quality of life for those affected and their family members. It has become increasingly clear over recent years that depression is a chronic stress-induced disorder. Hence, it is also referred to as "stress depression". It is a risk factor in the development of other widespread serious illnesses, including heart attacks, strokes, osteoporosis and diabetes. Left untreated, depression can reduce life expectancy.

Depression is a serious illness, but it can be cured. It is not normal sadness, nor a breakdown, nor a weakness of will! Advances over recent years have given us a new, more comprehensive picture of the ways in which depression can be treated.

Sustained and specialised psychotherapy and drug treatment of depression is important for complete recovery as 80% of patients with lingering symptoms will suffer a relapse. During maintenance treatment to prevent relapses, patients are monitored for at least six months after the symptoms of the disorder have regressed. Long-term therapy is all the more important the more frequent the depressive phases in the past and the more severe they have been. In other words, patients are therapeutically monitored beyond the maintenance treatment period.

This guide is based on the latest research findings and should improve your understanding of the illness "depression". It is aimed at those affected, their family members and friends and interested parties in equal measure. This guide is not a substitute for personalised medical advice and diagnosis, but may help to stimulate more in-depth discussion.

Best regards,

PD Dr. med. Dr. rer. nat. Martin E. Keck

# Important Facts in a Nutshell

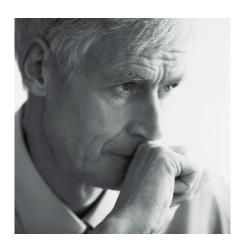


- 1. Depression is a serious illness and may even be life-threatening in some cases. It requires specialist treatment.
- 2. The main symptoms of depression are feeling sad or empty inside, feeling burned out or overtaxed, feeling anxious, internal disquiet and thought and sleep disorders.
- **3.** People suffering from depression can no longer feel joy and find it very difficult to make even simple decisions.
- **4.** Depression is often accompanied by persistent physical afflictions, such as pain in the gastro-intestinal tract, abdomen or back or headaches. These symptoms are very prominent in many sufferers.
- **5.** Groundless feelings of guilt can be a significant indicator of depression.
- **6.** Like all seriously ill people, people suffering from depression need understanding and support from those around them.
- 7. Depression is characterised by a neurometabolic disorder in the brain. The concentration of neurotransmitters (serotonin, noradrenalin and dopamine) is out of kilter. Sustained overactivation of the stress hormone system is usually the cause of this. Left untreated, this overactivation can also lead to possible secondary diseases such as high blood pressure, heart attack, stroke, diabetes and osteoporosis. Therefore, careful sustained treatment is very important.

- 8. Depression can be cured. Treatments include various tried-and-tested forms of psychotherapy, modern mood-enhancing drugs (antidepressants), stress management and relaxation techniques and complementary medicines (such as phytotherapy).
- **9.** Modern antidepressants have few side effects. Those that do arise are usually only manifested at the start of the treatment. They are not addictive. They do not alter one's personality. They are neither stimulants nor sedatives.
- **10.** Antidepressants do not have an immediate effect. Days or even weeks can usually pass before an improvement is seen.
- 11. If drugs are required, it is very important that they are taken regularly and precisely according to the doctor's instructions. Any side effects, feelings of malaise, anxieties or doubts should always be discussed openly with the treating physician.
- 12. There are preventive treatments for recurring depression.
- **13.** Suicide is a big risk. The risk of suicide can be detected in good time. It is an emergency. People at risk of suicide must be seen by a doctor as quickly as possible.

# What do we mean by depression?





# Depression: a common and important illness

As depressive disorders are so common, it is very important that doctors of all specialties and the public in general know how they can be treated and alleviated. Some 15% of the population is affected, with women twice as likely to suffer from depression as men (men: 10%, women: 20%). This means that all of us are bound to have a relative, associate or friend with this illness. Unfortunately, the disorder is still too commonly hushed up or goes undetected. As "depression" is often used in everyday conversation to indicate just feeling a bit down, this is one reason why depression is underestimated.

The disorder can affect anyone of any age – from children to the elderly. It can become chronic in approximately 15-20% of cases, particularly if left untreated or insufficiently treated. 50-75% of cases suffer a second

episode. As the number of episodes increases, so does the risk of yet another episode. Therefore, careful treatment of each individual disorder is all the more important.

# Symptoms of depression

Depression can have many symptoms and some will be more pronounced than others. Typically, there is a noticeable variation in complaints from person to person. According to the criteria of the World Health Organisation (ICD-10), a depressive episode is characterised by a persistent low mood for at least two weeks. This is accompanied by a lack of ability to feel joy and a loss of drive and interest as well as reduced concentration and general capacity. There are also characteristic physical symptoms, such as sleep disorders, loss of appetite and weight and the restriction of thoughts to the perceived hopelessness of the situation. These can even lead to thoughts of death and actual suicidal intentions. Thinking is slowed and mostly revolves around a single topic, usually how bad things are, how futile the situation is and how hopeless the future looks.

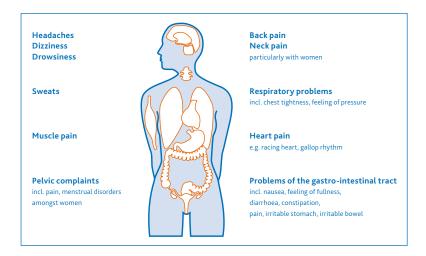
## Sleep disorders

Sleep disorders can make it difficult for sufferers to fall asleep, cause disturbed sleep with repeated waking and early waking. The sufferer feels as if he is not getting enough sleep and that what sleep he is getting is neither restorative nor deep. Even a long sleep can bring little tangible recuperation if there is no deep sleep or sleep where we dream or if the individual sleep stages are not run through in sequence. This is what happens with depression. Modern clinics can examine sleep. Antidepressants can restore a normal, healthy sleep architecture.



# Special types of depression

Special types of depression can be differentiated between on the basis of particularly pronounced symptoms. "Masked depression" is one of the most important of these. Physical symptoms, vegetative disorders and organ problems are prominent with this. Another sub-type—"melancholic depression"—is characterised by pronounced morning lows, weight loss, joylessness and loss of libido and interest. Depression can manifest itself very differently in others also. Instead of feeling despondent or sad, some people may react with irritability, aggressiveness, annoyance or increased alcohol consumption. In some cases, they may over-exercise. Those affected feel stressed and burned out. Men are more prone to these kinds of symptoms.



Possible physical symptoms of depression. The physical complaints may be so pronounced that detection of the underlying mental complaints becomes difficult. We refer to this as masked depression.

### Burn-out syndrome

"Burn-out syndrome" refers to exhaustive depression caused by continuous (work) pressure. Burn-out syndrome is characterised by energy loss, reduced performance, indifference, cynicism and lack of interest where very high commitment and above-average achievements had previously been the norm, often over many years. A relatively small trigger (such as a change of job) may often be enough to trigger the illness after many years of the stress building up. Many times there is also vague physical pain, such as increased sweating, dizziness, headaches, problems in the gastro-intestinal tract and muscle pain. Sleep disorders are very common with this type of depression also. Burn-out syndrome can develop into severe depression.

### Depression in later life

"Late-life depression" is the term used to describe the illness in the over-65s. Depressive disorders are no more common as a whole in later life. However, depression is often overlooked in the elderly and may go untreated for years. Older patients are more likely to keep quiet about depressive symptoms and complain instead about other physical disorders. Therefore, different physical symptoms are more often to the fore in the elderly than younger patients. Vague pains in the elderly may often indicate an underlying depression, for example. Late-life depression may also arise or be fostered by a lack of nutrition or incorrect diet or through insufficient fluid intake.

### Postpartum depression

Postpartum depressive episodes affect around 10-15% of women and usually start in the first or second week. They can often creep up over weeks or months. The clinical picture is no different from that of a typical depressive episode in other periods of life. Postpartum depression should not be confused with the more common "baby blues". These start in the first week after birth, but usually not before the third day, and only last a few hours to a few days. Approx. 50% of women will experience these after giving birth and they are not considered an illness.

### Seasonal depression

Dark overcast winter days can make us feel low. Some cases of "seasonal depression" or "winter depression" can lead to a severe and even life-threatening disorder. The lower amount of light reaching us through our eyes at this time of year is the cause. In the case of people susceptible to this, it can cause a metabolic disorder in the brain and thus depression.





# Depression: a life-threatening illness

Depression is a serious illness that can even be life-threatening in some cases. It can end in death if left untreated. Death from depression-related suicide is the second most common cause of death amongst people of up to 40 years of age after accidental death. Almost all patients with severe depression have at least suicidal thoughts. If depression is recognised and treated, the often overwhelming wish to die also disappears.

#### Risk of suicide

It's important to know how great the risk of suicide is for each person with depression. This is best identified by directly discussing it with the person affected, and finding out how intensively and how often he finds himself thinking about suicide. It is often supposed that this should never be discussed with a depressed person as it may just "give them ideas". This isn't the case. In their despair, every depressed person has already at least thought of this possibility and usually finds it a relief to finally talk about it. Suicidal tendencies represent an emergency! People at risk of suicide must be seen by a doctor as quickly as possible.

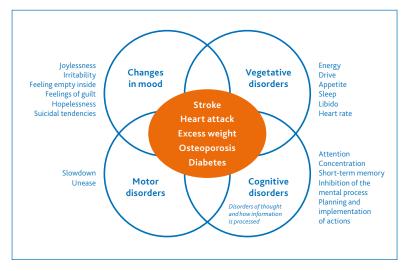
The man, who, in a fit of melancholy, kills himself today, would have wished to live had he waited a week"

# What causes depression?



# Depression affects the entire body

Depression is a risk factor for vascular complaints such as heart disease and stroke. Therefore, it is probably as important as the classic risk factors of smoking, being overweight and lack of exercise, although the general public is far more aware of these and they feature much more prominently in preventive health policy strategies. Depressive disorders can also lead to osteoporosis and adult onset diabetes. Therefore, depression is now considered a "systemic" illness as it not only affects the brain but also many other organ systems. All of this emphasises the huge importance of early, careful and sustained treatment.



Symptoms of depression

# What triggers "stress depression"?

There is rarely just one cause of depression. Usually there are a number of interlinked factors and an innate susceptibility to the illness. Acute stresses such as the loss or death of an important person to whom we are close or chronic pressure situations can trigger a depressive disorder. There are often social factors requiring us to adapt to new circumstances (such as a marriage, unemployment, retirement) before a depression. However, not all patients have these kinds of triggers. Many depressions can affect people out of the blue. Therefore, one should be very careful about viewing depression simply as a traceable, understandable response to difficult life circumstances. Serious strokes of fate do cause sorrow, a depressed mood and general feelings of being unwell, but these may not necessarily be depression. However, if a depressive disorder exists it must be treated rigorously. A person may often have been under stress for many years without being ill. However, a relatively small event in itself may be the straw which breaks the camel's back and triggers the illness.

The brain's metabolism is disturbed during depression, with the neurotransmitters serotonin, noradrenalin and dopamine out of kilter with one another. The disturbed control system for stress hormones is the cause as persistent overactivation of the stress hormone system can disturb nerve cell metabolism to such a degree that the production and degradation of the transmitters is derailed. They are either present in too low of a concentration or transmission is no longer working correctly. If transmission between the nerve cells is disturbed as a result, this also gradually lowers how we feel and our thoughts resulting in a lack of drive, loss of appetite, sleep disorders, difficulty concentrating and other symptoms of depression. Antidepressant drugs can be used at this point to restore the brain's metabolic balance by normalising stress hormone regulation. Psychotherapy can also achieve this. That is why a combination of psychotherapy and drugs achieves the best results in moderate and severe depressions.

# How is depression treated?



If treated properly, depression is curable nowadays.

The three stages of effective treatment of depression

#### Acute treatment:

Improves and eases complaints
Duration: 4-8 weeks

#### Maintenance treatment

Prevents relapses by further stabilising the symptomless phase of the illness. A complete cure can only be assumed once the patient has had no symptoms under this treatment for a period of six months. Duration: at least six months.

#### Preventing relapse

Prevents the illness recurring after a complete cure and prevents a new episode of the illness from developing. Duration: one to several years.

## Treatment concept

A holistic concept is required to effectively treat depressed patients. This may include various psychotherapeutic approaches, such as cognitive behavioural therapy, depth psychological therapies and conversational therapy, selected or individually combined according to the needs of the respective patient. Besides drug therapy, individual and group therapies may also be applied along with additional body-oriented or creative therapeutic procedures, relaxation therapies and stress management sessions (such as biofeedback, progressive muscle relaxation as per Jacobson, yoga, qigong, tai chi) in different individual combinations depending on the symptoms.

# **Psychotherapy**

The treatment of depression should always include psychotherapy. Ideally, this changes the way the patient deals with stress and corrects negative individual evaluations and the processing of personally stressful events in the patient's life. Psychotherapeutic procedures such as cognitive behavioural therapy (CBT) and interpersonal psychotherapy (IPT) have been well studied and their effectiveness proven. They also reduce the long-term risk of relapse and have been applied with great success in both out-patient and in-patient treatments. With these modern therapeutic approaches, the focus of the treatment is principally on finding solutions and mobilising resources, not on solely examining old conflicts and causes or being preoccupied with deficits.

Our feelings, thoughts and actions constantly affect each other and our physical functions. Feeling low can be accentuated further by negative thoughts, for example. Social withdrawal, which is often the natural consequence of feeling bad, further strengthens the unpleasant thoughts and feelings. This generates more stress which simply perpetuates the vicious circle in which the depressed person finds himself trapped. Psychotherapeutic treatment offers starting points for breaking depression's vicious cycle. It is often important to take up activities again which can improve one's mood with therapeutic support. When depressed, a person just isn't capable of doing this alone. It's also important to recognise how certain situations can almost automatically trigger certain negative feelings and thoughts when a person is depressed. Typically depressed thoughts are one-sided and negatively contorted. Depression causes us to see everything through a dark lens. Psychotherapy helps us to slowly rid ourselves of this lens.





### Cognitive behavioural therapy

All of us develop behavioural patterns, mindsets and emotional responses typical to us over our lifetime through personal experience and imitation. In respect of the development of depression, there are a range of typical thought and behavioural patterns which can lead to illness when combined with high pressure situations and chronic stress. Problematic behaviours, thought patterns and mindsets are specifically tackled and examined during treatment. "Cognitive behavioural therapy" focuses on both negative thought patterns and on the behavioural level. Changing a person's behaviour, such as by getting them to take up pleasant occupations and social activities again, slowly leads to positive emotions and new experiences. This in turn fosters a changed mindset and vice versa. Amongst other things, the aim of cognitive behavioural therapy is to impart skills for successfully and satisfactorily constructing social relationships and dealing with one's feelings. Another goal may be encouraging the patient to work through stressful experiences from the past, current crises and difficult life situations.

### Interpersonal psychotherapy (IPT)

Interpersonal psychotherapy is specifically tailored to the treatment of depression. It assumes that interpersonal relationships can significantly contribute to the development of depression. It is thought that a patient's earlier interpersonal and mental experiences also manifest themselves in current behaviour. For example, stressful events (such as the death of a loved one or separation from a partner) and difficult life circumstances (such as bullying in the workplace, losing a job and retirement or permanent disputes with family members) can cause depressive symptoms to appear. For other patients, working through moments of loss (mourning) or managing transitions between particular social roles (such as when children leave home or a person enters retirement) can be important. The goal of interpersonal psychotherapy is to reduce depressive symptoms and improve interpersonal relationships in the private and/or professional spheres.

### Further elements of psychotherapy

"Stress management" is another important component of psychotherapy. Psychoanalytic or depth-psychological therapy can also be very useful in individual cases. These attribute great significance to childhood development. Psychoanalysis assumes that influences in our early years in particular can leave tracks in our psyche. In therapy, the patient works on recognising and processing hidden or suppressed conflicts.

In the case of "systemic (family) therapy", the focus is on the group (= system) in which the individual lives. This system might be a married couple, a family, a group of friends or a team at work. It is assumed that the ill person is simple a "bearer of symptoms" and the causes of his problems must be looked for and worked through in the system as a whole. As with interpersonal psychotherapy, interpersonal and social aspects are also at the centre of this.



# Drug therapy

While excellent treatment results can usually be achieved through psychotherapy alone in the case of minor forms of the illness, antidepressants are also used to treat moderate to severe depression. The drugs are all based on the action principle of strengthening the neurotransmitters (serotonin, noradrenalin, and dopamine) discovered in Switzerland over 50 years ago by Roland Kuhn. It was long thought that antidepressants only affect the level of concentration of these neurotransmitters. However, we now know that they work to normalise stress hormone activity. Even St. John's wort (Hypericum perforatum), a plant remedy used for minor to moderate depressive disorders, influences serotonin and noradrenalin, amongst other things. To avoid wasting time changing drugs unnecessarily and too quickly if at all possible, it should be noted that the antidepressant effect usually only starts working two to four weeks later. Therefore, the prescribed preparation should only be changed after sufficient dosing, allowing at least four weeks.

Possible side effects (e.g. weight gain, sexual function disorders, and nervousness in rare cases), the treatment case history and individual symptoms of the current episode of the disorder are significant in choosing the antidepressant. If symptoms such as sleep disorders, unease, nervousness, anxiety or suicidal tendencies, for example, are to the fore, sedative (i.e. relaxing) antidepressants would be the first choice, possibly in temporary combination with a benzodiazepine. Antidepressants (unlike conventional sleeping pills) normalise the sleep architecture that has been disturbed by depression, leading to restorative sleep and alleviating sleep disorders.

Antidepressants do not increase the risk of suicide. However, pharmacotherapy may worsen suicidal thoughts or actions in the early phase of the treatment in some cases, as it may cause nervousness and activation through the stimulation of the neural metabolism at this point in time, before the antidepressant effect is felt. This underpins the existing need with depression to treat and support patients closely and to carefully check the need for temporary prescription of benzodiazepines. These kinds of side effects can often be alleviated or countered through plant-based preparations (phytotherapeutics). These include passion flower herb, valerian root, butterbur root and lemon-balm leaves.

## Myths about antidepressants

All antidepressants currently used to treat depression have few side effects.

Where side effects do develop, these are often at the beginning and temporary.

Antidepressants are not addictive and do not change a person's personality. They are neither stimulants nor sedatives. The goal of the treatment is never to cover up problems. On the contrary, drug therapy often lays the foundation for psychotherapy through the gradual recovery of the patient. Used correctly, antidepressants act like a support or crutch, helping to normalise neural cell metabolism and remobilise our body's own healing powers. They can help us to help ourselves.





# Relaxation techniques

Therapeutic stress management techniques (in addition to psychotherapy)

- Active stress management training
- Autogenic training
- Progressive muscle relaxation
- Biofeedback neurofeedback
- Tai ch
- Oigong
- Craniosacral therapy
- Massage
- Reflexology
- Hydrotherapy (e.g. Kneipp therap)
- Aromatherap\
- Acupuncture

# Tried-and-tested complementary non-drug treatments

Other tried-and-tested treatment options, such as "wake therapy" (sleep deprivation treatment) and light therapy, can be used to complement drug therapy or as an alternative to it in the case of milder forms. In severe cases, the new methods of "vagus nerve stimulation" (VNS) and "transcranial magnetic stimulation" (TMS) are being successfully applied in specialised centres by experts. Treatment can also be supplemented with suitable complementary medicine approaches, including naturopathic concepts such as phytotherapy (herbal medicine) and hydrotherapy (water applications, such as Kneipp therapy), traditional Chinese medicine (such as acupuncture, qigong), massages and aromatherapy.

### Wake therapy

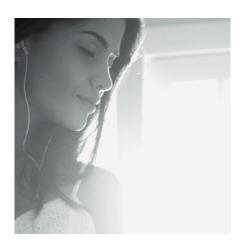
Sleep deprivation lifts our mood. This may sound strange at first, as many depressive patients are already suffering from sleep disorders. However, sleep deprivation, usually partial only, has proven excellent results in the treatment of depression. The patient goes to bed normally and is woken at around one in the morning. It's important that the patient does not even take a nap during the wake therapy or the day after. This can destroy the overall mood-enhancing effect. This therapy is usually conducted in a therapeutic support group as it's very difficult to accomplish this alone.

## Light therapy

This therapy has practically no side effects and has not only proven itself to be highly effective in treating winter depression but all types of depression. The patient is exposed to a bright light source (2500 to 10000 lux) each morning for 30 to 60 minutes. The patient can also read during this time. The earlier in the morning the light therapy, the better the success of the treatment in general. The treatment can also be used preventively if depression typically recurs in autumn and winter.

# Twelve basic rules on treating depression





- 1. Be patient with yourself! Depression usually develops slowly and is also more likely to regress gradually under treatment. Therapy takes time and it's worth it.
- 2. If you need drugs, please take them precisely as prescribed by your doctor. Be patient the effect is usually delayed.
- **3.** Antidepressants are not addictive and do not change a person's personality.
- **4.** It is important that you inform your doctor of any changes in how you are feeling and that you address any worries, anxieties or doubts you may have about the treatment in an open and trustful manner.
- **5.** Inquire immediately if you experience any unpleasant side effects. They are usually harmless and appear only at the beginning.

- **6.** Even if you are feeling better, do not discontinue your medication! This has to be planned carefully.
- **7.** Plan each day as precisely as possible the evening before (using a timetable, for example). Incorporate pleasant activities into your plan.
- **8.** Set yourself small straightforward goals. Your doctor or therapist can help you with these.
- **9.** Keep a mood diary. Your doctor or therapist can explain to you how to do this and will regularly discuss your notes with you.
- **10.** Get out of bed immediately after waking up. Lying in bed awake when depressed can cause sufferers to overthink things. This can often make them feel very bad. Develop strategies with your therapist in such a situation.
- **11.** Be physically active. Exercise has an antidepressant effect and promotes nerve cell regeneration.
- **12.** When you're feeling better: work with your doctor or therapist to find out how you can reduce your personal risk of a relapse. Identify the early warning signs and draw up a crisis plan.