



What is Korsakoff's syndrome?

Korsakoff's syndrome is a brain disorder associated with heavy drinking over a long period. While not strictly speaking a dementia, those with the condition experience loss of short-term memory. This sheet outlines the causes, symptoms and treatment of the syndrome.

What causes Korsakoff's syndrome?

Korsakoff's syndrome is caused by lack of thiamine (vitamin B1) which affects the brain and nervous system, rather than by alcohol directly. Lack of thiamine can occur because:

- Many heavy drinkers have poor eating habits. Their nutrition is inadequate and may not contain essential vitamins.
- Alcohol can inflame the stomach lining and impede the body's ability to absorb the key vitamins it receives.

Korsakoff's syndrome may also occur in other conditions where there is severe malnutrition, but this is extremely rare.

Korsakoff's is part of the Wernicke-Korsakoff syndrome which consists of two separate but related stages: Wernicke's encephalopathy and Korsakoff's psychosis. However, not all cases of Korsakoff's are preceded by an episode of Wernicke's. Another term of Korsakoff's is 'Alcohol amnestic syndrome', amnestic meaning loss of memory.

What is Wernicke's encephalopathy?

An encephalopathy is a disorder affecting the brain. Wernicke's encephalopathy usually develops suddenly. There are three main symptoms, though these are not always present, so diagnosis may be difficult. They are:

- Involuntary, jerky eye movements or paralysis of muscles moving the eye.
- Poor balance, staggering gait or inability to walk.
- Drowsiness and confusion.

Immediate treatment is essential if Wernicke's is suspected. Treatment consists of high doses of thiamine injected into a vein or muscle. If treatment is carried out in time most symptoms should be reversed in a few hours. However, if Wernicke's is left untreated, or not treated in time, brain damage may result. In some cases the person may die.

What is Korsakoff's psychosis?

Korsakoff's psychosis may follow in if the Wernicke's encephalopathy is untreated or not treated soon enough. It may also develop gradually. Brain damage occurs in important small areas in

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the mid part of the brain resulting in severe short-term memory loss. Many other abilities may remain intact.

Korsakoff's differs from most dementias where there is damage to a large area of the cortex, the outer part of the brain, thus affecting a wide range of abilities.

What are the symptoms?

As mentioned, the main symptom is memory loss, particularly for events arising after the onset of the condition. Sometimes memories of the more distant past can also be affected. Other symptoms may include.

- Difficulty in acquiring new information or learning new skills.
- Lack of insight into the condition. Even a person with great gaps in their memory may believe their memory is functioning normally.
- Inventing events to fill the gaps in memory. This is more common in the early stages of the illness and is known as 'confabulation'.
- Some people are apathetic, others are talkative and repetitive.

However, a positive feature is that people usually retain the skills they acquired before developing the disorder so they are often able to get by with appropriate support.

How is Korsakoff's diagnosed?

Korsakoff's syndrome cannot be diagnosed until the person has abstained from alcohol for at least four to five weeks to enable the acute symptoms of alcohol withdrawal to subside.

Psychological tests will then be carried out to test the person's memory and other abilities to see whether they may have Korsakoff's or some other condition.

They will also be observed to see whether their condition progresses without alcohol. If their condition does not change, they may be diagnosed with a form of dementia, such as Alzheimer's disease. It is possible to have both Korsakoff's and a dementia.

Who is affected?

Those affected tend to be men between 45 and 65 with a long history of alcohol abuse, though it is possible to have Korsakoff's at an older or younger age.

Women can also be affected. They tend to develop Korsakoff's at a slightly younger age than men as they appear to be more vulnerable to the impact of alcohol.

It has been suggested that whereas it may take around 20 years for a man to develop Korsakoff's syndrome, it may take about half that time for a woman.

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It is not yet clear why some heavy drinkers develop Korsakoff's syndrome and others do not, although this may relate to diet.

Treatment

The progress of Korsakoff's can be completely halted if the person:

- Completely abstains from alcohol
- Adopts a healthy diet with vitamin supplements

While it remains unclear whether additional thiamine helps people improve once the brain damage has already occurred, it may help prevent further damage occurring.

Prognosis

Any improvement usually occurs within a period of up to two years. It has been estimated that about a quarter of those affected will make a very good recovery. About half will make a partial recovery and need support to manage their lives.

Another quarter will make no recovery and may need long term care. Korsakoff's is likely to continue to progress if the person continues to drink heavily and has poor nutrition.

Other problems associated with heavy drinking

- Alcohol can have a harmful effect on nerve cells in the cortex (the outer layer of the brain). A wide range of skills and abilities will be affected. This is sometimes known as alcoholic dementia.
- However, deterioration will cease and there is often some recovery over a period of time if people abstain from alcohol completely. At present there is a lot of research into this area and into how it may overlap with Korsakoff's psychosis.
- There may be physical disorders associated with drinking such as damage to the liver or damage to nerves in the legs and arms.
- People with drinking problems are more likely to have experienced head injuries due to accidents, fights or epileptic seizures.

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