

Coma - vegetative state

Coma is a state of unconsciousness that is similar to deep sleep, except no amount of external stimuli (such as sounds or sensations) can prompt the brain to become awake and alert. A person in a coma can't even respond to pain. In some cases, the person wakes up from their coma and, depending on the cause and severity of the coma, may or may not have permanent brain damage.

In other cases, the person descends into a vegetative state. If this lasts longer than a month or so, it is known as a persistent vegetative state. The brain has lost its higher functions (including consciousness, self-awareness and personality) but can still maintain involuntary functions such as breathing and swallowing, heart rate and blood pressure. Common causes of persistent vegetative state include severe head injury and oxygen deprivation. Comas usually only last a few weeks, but a vegetative state can continue for months or even years. The longer the person remains in this state, the bleaker their chances of making a recovery.

Signs of vegetative state

Some of the characteristics of a vegetative state include:

- The person looks like they're asleep
- They can't wake up, talk or respond to commands
- The eyes may open in response to stimuli
- The person is able to move their body
- Heart rate, blood pressure and respiration continue
- The person can randomly laugh, cry or pull faces.

The brain stem is undamaged

A person in a persistent vegetative state has damage to the cerebral hemispheres - the areas of the brain that govern sophisticated functions like consciousness, self-awareness and personality. However, the brain stem is intact, so the person retains motor reflexes, sleep-wake cycles and the activity of their autonomic nervous system. This includes the regulation of many functions essential to life such as heart rate, respiration and blood pressure.

Common complications

Common complications of a persistent vegetative state can include:

- Infections
- Pneumonia
- Bed (pressure) sores
- Contracture (muscles shorten and contort the body).

Ongoing medical care is vital

The person's chances of recovery decrease as time goes by. There is often no way of knowing how long the vegetative state will last, so it is important to keep the person as healthy as possible in the hope they eventually recover. Medical care includes:

- Prevention and treatment of infection.
- Keeping the skin clean and regularly turning the patient to prevent bedsores and subsequent ulceration.
- Physical therapy to help keep the muscles supple.

- Good nutrition, delivered via an intravenous drip.

Prospects of recovery

The chances of recovery vary according to the location and severity of the brain damage. Generally, the longer the person remains in a vegetative state, the bleaker their chances. Recovery is usually a slow process, with the person first gaining some awareness of what's going on around them and eventually being able to respond. However, only a small percentage of people who wake from a persistent vegetative state after six months or more are able to live independently. In most cases, they are permanently brain damaged and disabled.

Where to get help

- Your doctor
- Neurologist

Things to remember

- A person in a persistent vegetative state has damage to the areas of the brain responsible for consciousness, self-awareness and personality.
- The intact brain stem means the person retains motor reflexes, sleep-wake cycles and the activity of their autonomic nervous system.
- Common causes of persistent vegetative state include severe head injury and oxygen deprivation.
- The longer the person remains in a vegetative state, the bleaker their chances of recovery.

This page has been produced in consultation with, and approved by:

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