Understanding Brain Death



Facing the loss of a loved one is difficult in any context. You may be overwhelmed with information and decision making. Whether your loved one had specific plans to follow in the event of their death, or not, it can be tough to carry on. One of the most trying cases is when a loved one has brain death. This can be confusing when they may still have a heartbeat and are breathing. It may look like the person is simply asleep.

What does it mean to be brain dead?

Brain death means the brain no longer functions. No blood is flowing to the brain. The thinking part of the brain (cerebrum) as well as the part of the brain responsible for breathing and reflexes (brain stem) no longer work. Brain death is diagnosed when 3 conditions exist.

The person:

- Is in a persistent coma
- Has no brainstem reflexes
- · Can't breathe on their own

Breathing and heartbeat can be artificially continued for a short time using a ventilator or breathing machine. Once the machine is removed, breathing and the heart stop. Removing the breathing machine may be delayed for a short time until family is gathered or in the case of organ donation. Once breathing has stopped or the machine is turned off, expect that the person may still have some spinal activity. For example, the body may twitch, the back may arch, arms and legs may flex. This is a result of electrical impulses that remain in the spinal column.

How is brain death diagnosed?

Doctors and other healthcare personnel take great care to verify a person brain dead. A coma or being in a vegetative state is not the same as brain death. Various tests are done to confirm the diagnosis. Along with a physical exam, a test called the apnea test is done. For this, the breathing machine is removed for a period of time (8 to 10 minutes). If the person does not begin breathing on their own, they are considered brain dead. Blood tests will show a buildup of carbon dioxide in the body. In some cases, a brain scan or brain wave test may also be done.

What causes brain death?

Any major injury to the brain can cause brain death. This includes things such as a stroke, injury from an accident, lack of oxygen to the brain such as from drowning or cardiac arrest, a brain infection, or liver failure. Brain death cannot be reversed.

Symptoms of brain death

The healthcare provider will look for signs of brain death such as:

- · Pupils don't respond to light
- Person can't breathe on their own
- There is no cough or gag reflex
- No reaction to pain
- · Eyes don't blink or move when touched

Who can I call for help?

Some family members or loved ones may struggle with the concept of brain death. A faith leader or hospital chaplain may be able to help. If organ donation is an option, you may wish to talk to the organ transplant coordinator who can answer your questions and help you navigate next steps. Many hospitals have an ethics board who may review your concerns particularly for religious reasons and in the case of pregnancy.

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