

Neurocysticercosis: Parasitic infection that affect brain.

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Editorial

Cysticercosis is a bacterial tissue infection caused by larval cysts of the tapeworm *Taenia solium*. This larval cysts entering the brain, nerves, or other tissues are a major cause of adult seizures in most low-income countries. Cysticercosis is caused by swallowing eggs contained in the feces of a person who has an intestinal tapeworm. Some regions of the central nervous system, such as the spinal cord, are often damaged by brain infections. The brain and spinal cord are mostly immune to infection, but when they do get compromised, the consequences can be devastating. Infections can cause inflammation in the brain (encephalitis). Viruses are the most common cause of encephalitis. Infections may also cause inflammation of the tissue membranes (meninges) that shield the brain and spinal cord, resulting in meningitis. Bacterial meningitis can also spread to the brain, causing encephalitis. Similarly, viral infections that cause encephalitis may also cause meningitis. In both the brain and the meninges are infected, the condition is termed meningoencephalitis. The infection that primarily affects the meninges is known as meningitis, while the infection that primarily affects the brain is known as encephalitis. The symptoms and manifestations of a parasitic infection of the nervous system are varied. It can be difficult to diagnose an illness and the signs are always mild or nonspecific.

Contrary to popular belief, sickness is not caused specifically by eating undercooked beef. When undercooked pork is eaten, the cysts induce tapeworm infection in the small intestine, with each worm shedding thousands of eggs. Neurocysticercosis is caused by embryos, which may be handed on from generation to generation. If a human consumes tapeworm eggs (that were shed by a tapeworm carrier), the worm's embryo will drill

through the intestine and into the central nervous system or spinal cord, causing intensified intracranial pain, headaches, and seizures. Hand washing is important for prevention, as is avoiding poisoned meat and ensuring that only properly cooked pork is consumed.

Tapeworms in pork have a normal life cycle in which the pig consumes tapeworm larvae. The eggs hatch and burrow through the pig's intestine's gut wall into muscle tissue. They encyst and grow into cysticerci, also known as larval cysts, there. When a pig is slaughtered and its meat eaten by a human, cysticerci are released into the intestinal wall, where they mature into adult tapeworms that lay eggs. This is known as adult tapeworm disease, and it usually has no symptoms. People with adult tapeworm infection, on the other hand, can experience cysticercosis so they can release *T. Solium* eggs are contained in their feces and can be swallowed (autoinfection). *T. solium* eggs may also be regurgitated or refluxed into the stomach by certain people.

A diagnosis of cysticercosis can be made based on a detailed clinical examination, a thorough case history, and a variety of advanced tests. Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scanning will also detect neurocysticercosis. In cases where symptoms are present, people are often treated with drugs or surgery. The antiparasitic drug albendazole (Albenza) was approved by the Food and Drug Administration in 1996 for the treatment of cysticercosis (FDA).

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