- CDC reports that no one in the US has died of measles in the last 12 years. Meanwhile, 98 measles vaccine related deaths were reported to the US government since 2003.
- During that time period, 694 measles vaccine-related disabilities were reported to the Vaccine Adverse Reporting System (VAERS).
- Child mortality due to measles is 200 to 400 times greater in malnourished children in less developed countries than those in developed ones; as nutrition improves, complications and deaths radically diminish.

## What You Need to Know About Your Immune System

Your immune system consists of two different branches — cell-mediated immunity (innate) and humoral immunity (adaptive). An infectious disease process involves a cell-mediated immune response to a pathogenic virus or bacteria, which activates your natural killer (NK) cells that send inflammatory mediators to the site of infection, where the white blood cells basically chew up and spit out the infected cells.

This process clears the virus and during recovery, your humoral immune system kicks in and starts generating antibodies to help prevent the same kind of disease process and symptoms from occurring again, should you be re-exposed to the same pathogenic virus or bacteria later on.

As long as your cell-mediated immune system is activated first and the humoral immune system is activated second, usually you will have long-lasting immunity against that pathogen.

Naturally acquired **herd immunity** comes into play when a very high percentage of individuals in a population have gone through this sequence of cell-mediated and humoral immune response to a viral or bacterial disease.

Vaccine-acquired "herd immunity" is a misnomer, however, because most vaccines provide an artificial immunity that leans heavily on stimulating an antibody response (humoral immunity), which is incomplete and more temporary than the longer lasting cell-mediated plus humoral immunity acquired after recovery from an infection.

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