

The science behind the measles virus

INTRO: Measles, also called rubeola, is caused by a virus that spreads easily through the air and settles on surfaces. Symptoms, which show up about one to two weeks after getting infected, include fever, cough, runny nose, watery eyes and a telltale rash that starts on the face and neck, then spreads to the rest of the body.

Most people recover from measles, but sometimes it can cause serious complications and can even be fatal.

Learn more about measles from a Mayo Clinic expert. Jason Howland has the story.

VIDEO	AUDIO
	"This is a very tricky virus."
	Mayo Clinic's Dr. Robert Jacobson is talking about measles.
Robert Jacobson, M.D. Pediatric and Adolescent Medicine Mayo Clinic	"This little virus is basically a piece of RNA covered with some protein that lives only in cells, and frankly, only in human cells. It is similar to other viruses, in that it spreads cell to cell and then takes over the cell."
	Dr. Jacobson is medical director of Mayo Clinic's Primary Care Immunization Program. He says the measles virus most often starts by invading cells of the immune system. It then makes more copies of itself that spread over the entire human body, causing ear and sinus infections, pneumonia, and, in rare cases, brain and nervous system illnesses, including encephalitis.
	"It is the most contagious virus that we know. We have no other viral infection like this."
	"I said this virus was tricky. It took about 11 days in that journey of infecting the human to the point where it's become contagious."
	Measles virus is spread by tiny respiratory droplets from an infected person sprayed into the air or onto

	surfaces. If you breathe them in or touch the infected surface, then touch your eyes, nose or mouth, it can infect you.
	"And it will, 9 times out of 10, if they have no immunity from previous infection or a vaccination."
	"One of the other tricks of this virus, this respiratory particle, is that it can hang in the air for two hours after the infected person leaves the room. This means an unrecognized case of measles, a person who just has runny, watery eyes, nose, and a cough with a fever those first few days, they're spreading the respiratory droplets in every room and hallway they're in and leaving it hanging in the air."
	"This is a serious infection that none of us can afford to get."
	For the Mayo Clinic News Network, I'm Jason Howland.