Speaker 1: Hello and welcome to the … science show, I’m […]and these are my host co-hosts….

Speaker 2: \*Cough cough cough\* Jason [said exasperatingly] oh sorry I’ve been feeling under the weather today. Don’t you hate those feelings of… [explain symptoms of a cold]

Speaker 3: Well that’s a coincidence because today’s topic is: “How does a cold virus make us feel sick?”

Speaker 1: Let’s start with, what actually are viruses? Viruses are tiny, usually between 20 and 300 nanometres in size. They have a simple structure comprised of only a couple of enzymes and genetic instructions. This means a virus needs a host cell to live and reproduce.

Speaker 3: That doesn’t sound too threatening does it? Reminds me of the time when Jason lived on my couch for a few months using me as a host.

Speaker 1: That means Jason must be a virus. Hahaha

Speaker 2: Come on guys let’s continue. Our skin is a great barrier to viruses and bacteria. Inhalation of the virus particles is where we are vulnerable. Coughing and sneezing from an infected person causes virus particles to be released into the immediate area.

Speaker 1: Oh no, and Jason’s been coughing all day!

Speaker 2: Once the innocent victim inhales the virus particles, they attach to the cell lining in the nose and throat.

Speaker 3: The virus tricks a host cell with its protective protein capsule by a lock and key mechanism. This allows the virus to pass the cell membrane and enter the cell. Once inside the virus releases its genetic material into the host cell, this effectively hijacks the cell turning it into a virus producing factory.

Speaker 1: The cell starts looking like the 950 bus in the morning, cramped and full of viruses. Once it reaches capacity the cell explodes, releasing the newly created viruses into the local area ready to invade other cells. The pace picks up at an exponential rate as more and more cells are affected.

Speaker 3: It’s about time we unleash our body’s defences to fight back! Viruses are a tricky challenge to the body’s immune system because they hide inside your own cells. To combat the cold virus the immune system first opens up blood vessels and increases mucus secretions in an attempt to blanket and protect your cells from attack. This causes your runny nose and general stuffiness. All this extra fluid and irritation from the virus induces sneezing. If the virus makes it to the cells lining the lungs you can expect to start coughing too.

Speaker 2: Special white blood cells in your body are constantly patrolling your cells for infected specimens. If they manage to find one they swallow it, and travel straight to your lymph nodes to recruit Helper T cells. The Helper T Cells are mission control, they assess what the white blood cell has found and ramp up numbers of B Cells and killer T cells to hunt and destroy the virus infected cells. This process causes your swollen glands and general tiredness. You know this doesn’t actually make me feel any better.

Speaker 1: Well that wraps up todays … science show. Thank you for joining us as we answered the question “How does a cold virus make us feel sick.” Remember it’s actually our body fighting the virus that causes a lot of the symptoms we associate with a cold. We’re lucky it does such a good job though or otherwise we’d be in a lot worse shape than Jason is in currently.

All together: Science out! [Or something else lame].