

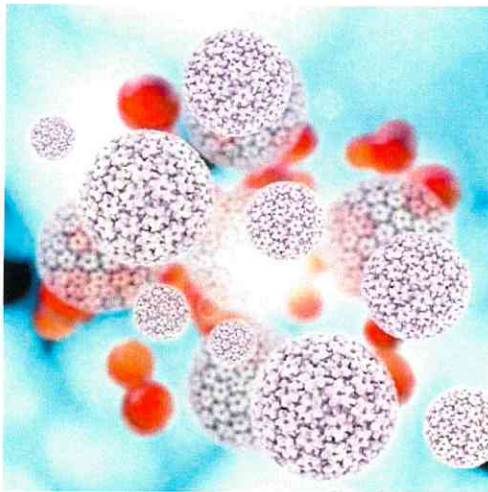
# Healthy humans 'harbor an average of five viruses'

Written by Honor Whiteman on September 21, 2014

---

ADVERTISEMENT

It is well established that our bodies possess gut bacteria that is beneficial for health. Now, researchers from Washington University in St. Louis, MO, have found that our bodies are also home to an average of five viruses responsible for numerous illnesses, although it is unclear whether they have positive or negative implications for health.



Strains of HPV were found in around 75% of participants' skin samples and 50% of nose samples, while new strains of the virus were found in both skin and nose samples.

“Most everyone is familiar with the idea that a normal bacterial flora exists in the body,” says study co-author Dr. Gregory Storch, a virologist and chief of the Division of Pediatric Infectious Diseases at the university. “Lots of people have asked whether there is a viral counterpart, and we haven’t had a clear answer. But now we know there is a normal viral flora, and it’s rich and complex.”

The findings, which form a part of the Human Microbiome Project funded by the National

---

## Latest news



Hope against COVID-19: Spotlight on 3 vaccine front-runners

Institutes of Health, were recently published in the journal *BMC Biology*.

The research team, led by Kristine M. Wylie, PhD, an instructor of pediatrics at the university, collected 706 samples of bodily fluids from 102 healthy adults aged 18-40. The samples were taken from participants' nose, skin, mouth, vagina and stools.

All participants were closely screened to ensure they had no viral infections, and they were eliminated from the study if they had had been diagnosed with [human papillomavirus \(HPV\)](#) in the past 2 years, or had a form of active genital [herpes](#) in the last 2 months.

For each sample, the researchers used high-throughput DNA sequencing that enabled them to detect a wide range of viruses.

## Seven families of viruses identified, including HPV and herpesvirus

Among 92% of participants, at least one virus was detected, with some participants harboring around 10-15 viruses. On average, each participant harbored five viruses. The researchers say they were surprised to find so many. "We only sampled up to five body sites in each person and would expect to see many more viruses if we had sampled the entire body," says Wylie.

From the samples, the team detected seven families of viruses. These included viruses responsible for non-sexually transmitted herpes – herpesvirus 6 and 7. These viruses were detected among 98% of participants who were sampled from the mouth.

**Strains of HPV were found in around 75% of skin samples and 50% of nose samples, while new strains of the virus were found in both skin and nose samples. Around 38% of female participants had HPV strains in vagina samples, with many of these harboring strains**

☰ NEWSLETTER

MEDICALNEWS TODAY



cold – in the majority of samples.

ADVERTISEMENT

It is possible, the researchers note, that the viruses identified were lurking infections from years before. But Wylie says that dormant viruses usually reside in cells rather than bodily fluids, which is where the viruses were found in this study.

Commenting on their findings, the team says:

"This study is the first to use high-throughput DNA sequencing to describe the diversity of eukaryotic DNA viruses in a large cohort of individuals who were sampled at multiple body sites. This analysis demonstrates that there is a 'normal viral flora' in generally healthy, asymptomatic individuals."



Study hints that supplements may reduce COVID-19 risk in females



Is the sugar substitute stevia bad for our health?



COVID-19 vaccine trials: Live updates



COVID-19 live updates: Total number of cases passes 68.9 million

**They admit that it is unclear as to whether the viruses are beneficial or detrimental to health, but they hypothesize that the viruses may boost the immune system’s response to harmful pathogens in some cases, while increasing the risk of infection in others.**

“It’s very important to know what viruses are present in a person without causing a problem and what viruses could be responsible for serious illnesses that need medical attention,” says Dr. Storch. “While more research remains, we now have a much clearer picture of the communities of viruses that naturally exist in healthy people.”

*Medical News Today* recently reported on a study claiming [viruses can spread to 40-60% of a building and its occupants within 2-4 hours.](#)

ADVERTISEMENT

## No health insurance? No problem. Get care with 4 YOUR HEALTH

Talk to a board-certified provider any time of day without worrying about insurance coverage or copays. 4 YOUR HEALTH offers unlimited access to doctors with their membership. Try a free 14-day trial.

[LEARN MORE](#)

[Biology / Biochemistry](#) [Immune System / Vaccines](#) [Infectious Diseases / Bacteria / Viruses](#)



### RELATED COVERAGE

ADVERTISEMENT



## What to know about anosmia

Medically reviewed by [Marc Meth, MD, FACAAl, FAAAAI](#)

Anosmia is the inability or decreased ability to smell. This article explores causes, treatments, and when to contact a doctor.

[READ MORE →](#)