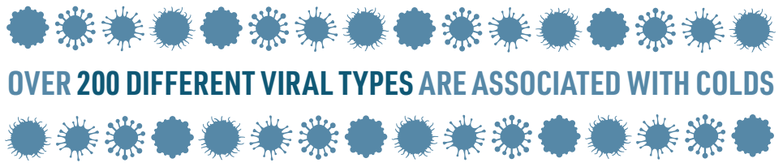
THE VIRUSES BEHIND COLDS AND FLU

THE COMMON COLD

ADULTS HAVE 2–5 COLDS EVERY YEAR

CHILDREN HAVE 7–10



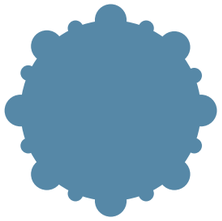
OVER 200 DIFFERENT VIRAL TYPES ARE ASSOCIATED WITH COLDS

PEAK OF SYMPTOMS AFTER ONSET

AVERAGE DURATION OF A COLD

Due to the number of viruses and their rapid mutation, vaccination against colds is very difficult. As colds are caused by viruses, not bacteria, antibiotics can't be used to treat them. There's limited evidence that zinc acetate lozenges can reduce the duration of a cold if taken from when symptoms start.

RHINOVIRUSES



30-50% OF ALL COLDS

3 SPECIES AFFECT HUMANS

DIAMETER: 30 NANOMETRES

The 3 species of rhinovirus that affect humans contain around 150 different serotypes (viruses that differ in their surface proteins). Rhinoviruses replicate best at temperatures found in the nose (33–35˚C); their name comes from the Greek *rhinos*, meaning 'of the nose'. They're one of the smallest viruses.

INFLUENZA VIRUSES

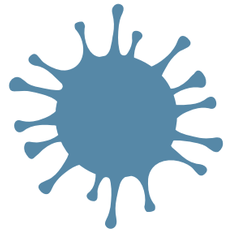
5-15% OF ALL COLDS

3 SPECIES AFFECT HUMANS

DIAMETER: 120 NANOMETRES

Infections with the influenza virus are commonly referred to as flu. Influenzavirus A, which has 12 known serotypes in humans, is the most common in humans and causes yearly flu outbreaks around the world. Due to the more serious symptoms, flu vaccinations are produced each year based on predictions of the strains of the virus most likely to be circulating. However, it does not confer protection against other strains and as the viruses mutate, doesn't protect against them in subsequent years.

CORONAVIRUSES



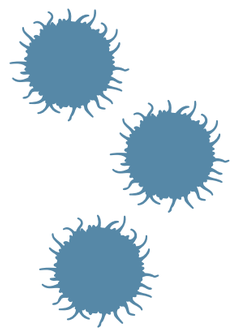
10-15% OF ALL COLDS

7 SPECIES AFFECT HUMANS

DIAMETER: 120 NANOMETRES

Coronaviruses cause colds with major symptoms, including fever, and can also cause pneumonia. Major outbreaks including SARS and the 2019-20 viral outbreak in China were caused by coronaviruses. They're named from the Latin *corona*, meaning crown, for their characteristic surface projections.

OTHER VIRUSES



RESPIRATORY SYNCYTIAL VIRUS.....5%

PARAINFLUENZA VIRUSES.....5%

ADENOVIRUSES.....<5%

OTHER ENTEROVIRUSES.....<5%

METAPNEUMOVIRUS.....?%

UNKNOWN.....20–30%

The virus causing a cold can be identified using several complex techniques. These are rarely used as the treatment is often independent of virus type. 5% of patients with colds are infected with two or more viruses simultaneously, and other cold-causing viruses may still be identified in the future.