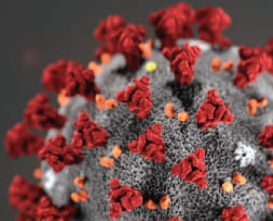


# What we know about the new coronavirus strain

Concerns are growing over a highly infectious strain of coronavirus that has emerged in the United Kingdom. The new variant, called B.1.1.7, is already present elsewhere in the world, scientists have warned



## ■ Why variant is causing concern

B.1.1.7 carries unprecedented number of mutations – changes in viral genetic code – and is rapidly replacing other versions of virus in parts of England

## ■ Speed of transmission

Variant up to 70 percent more transmissible than other strains in UK.

**R number** – which indicates if epidemic is growing or shrinking – may be increased by 0.4, making disease harder to control

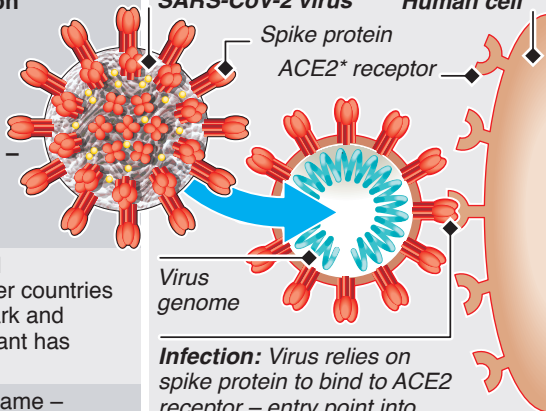
## ■ Geographical spread

Across UK. Cases in other countries include Australia, Denmark and Netherlands. Similar variant has emerged in South Africa

■ **Symptoms:** Broadly same – high temperature, persistent dry cough and loss of, or change in, taste and smell. **B.1.1.7 not believed to be any more deadly, although increase in transmission could cause problems for hospitals. Vaccines should still be effective against new variant**

■ **Virus mutation:** Viruses commonly change through mutation, leading to emergence of new variants. **Initial analysis of B.1.1.7 identifies two worrisome alterations to spike protein on virus surface**

## SARS-CoV-2 virus Human cell



**Infection:** Virus relies on spike protein to bind to ACE2 receptor – entry point into human cell for virus to replicate

**N501Y mutation:** Has previously been shown to increase how tightly protein binds to ACE2 receptor

**H69/V70 deletion:** Makes survivors' coronavirus antibodies less effective at attacking virus