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# 'One in six cancers worldwide are caused by infection'

By Michelle Roberts Health editor, BBC News online



Infection with human papillomavirus can cause cervical cancer

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One in six cancers - two million a year globally - are caused by largely treatable or preventable infections, new estimates suggest.

The [Lancet Oncology](#) review, which looked at incidence rates for 27 cancers in 184 countries, found four main infections are responsible.

These four - human papillomaviruses, Helicobacter pylori and hepatitis B and C viruses - account for 1.9m cases of cervical, gut and liver cancers.

Most cases are in the developing world.

The team from the International Agency for Research on Cancer in France, part of the World Health Organization, says more efforts are needed to tackle these avoidable cases and recognise cancer as a communicable disease.

### 'Preventable'

The proportion of cancers related to infection is about three times higher in parts of the developing world, such as east Asia, than in developed countries like the UK - 22.9% versus 7.4%, respectively.

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Infection prevention ...could have a substantial effect on the future burden of cancer worldwide”

Dr Catherine de Martel and Dr Martyn Plummer

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Nearly a third of cases occur in people younger than 50 years.

Among women, cancer of the cervix accounted for about half of the infection-related cancers. In men, more than 80% were liver and gastric cancers.

Drs Catherine de Martel and Martyn Plummer, who led the research, said: "Infections with certain viruses, bacteria, and parasites are some of the biggest and preventable causes of cancer worldwide

"Application of existing public-health methods for infection prevention, such as vaccination, safer injection practice, or antimicrobial treatments, could have a substantial effect on the future burden of cancer worldwide."

Vaccines are available to protect against human papillomavirus (HPV) - which is linked to cancer of the cervix - and hepatitis B virus - an established cause of liver cancer.

And experts know that stomach cancer can be avoided by clearing the bacterial infection *H. pylori* from the gut using a course of antibiotics.

Commenting on the work, Dr Goodarz Danaei from Harvard School of Public Medicine in Boston, the US, said: "Since effective and relatively low-cost vaccines for HPV and HBV are available, increasing coverage should be a priority for health systems in high-burden countries."

Jessica Harris of Cancer Research UK said: "It's important that authorities worldwide make every effort to reduce the number of infection-related cancers, especially when many of these infections can be prevented. In the UK, infections are thought to be responsible for 3% of cancers, or around 9,700 cases each year.

"Vaccination against HPV, which causes cervical cancer, should go a long way towards reducing rates of this disease in the UK. But it's important that uptake of the vaccination remains high. At a global level, if the vaccine were available in more countries, many thousands more cases could be prevented."