

# HPV infection linked to increased risk of skin cancer

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HPV infection heightens the risk of developing certain skin cancers and is worsened if people are taking immunosuppression drugs, according to a new study published in the British Medical Journal today.

An international team of researchers found that people with several types of human papillomaviruses (HPVs) were more than one and a half times as likely to develop certain skin cancers compared to people with no HPVs.

The most common skin cancers ([basal cell carcinoma](#) and squamous cell carcinoma) are increasing globally and [ultraviolet radiation](#) is the main established risk factor.

In addition, HPV infection - of which there are more than 100 types - may play a role in their development. Other types of HPVs are known to cause cancers of the cervix, vulva, vagina, anus, and penis.

Research so far has identified increased risks for people with skin HPV types called beta HPVs, particularly among organ transplant recipients and people with epidermodysplasia verruciformis (EV) - a rare genetic disorder, which leads to warts and malignant skin lesions.

Now researchers, led by Professor Margaret Karagas of the Dartmouth Medical School in the USA, wanted to find more conclusive evidence of a link between beta HPVs and the common skin cancers among the general population.

They studied 2,366 people living in New Hampshire, USA, made up of 663 people with squamous cell carcinoma, 898 people with basal cell carcinoma and 805 healthy controls.

As well as interviewing the study participants, the researchers measured HPV antibodies in blood samples of newly diagnosed and confirmed basal cell and squamous cell carcinoma patients from two periods - July 1993 to June 1995 and July 1997 to March 2000 and matched population controls.

Results showed that people with squamous cell carcinoma, but not basal cell carcinoma, were far more likely to have each of the beta HPV types compared to people in the control group. The likelihood of having squamous cell carcinoma increased as people were found to have more of the HPV types.

For example, people with [squamous cell carcinoma](#) were 1.4 times more likely to have two to three types of HPV, and 1.7 times more likely to have greater than eight types of HPV compared with the control group.

The researchers also found that people who were long term users of immunosuppressant drugs had more than a three-fold risk of squamous cell [carcinoma](#) in relation to HPV, but with limited statistical precision.

"Given the widespread and growing occurrence of these malignancies, our results raise the possibility of reducing the health and economic burden of these cancers through prevention or treatment of human papillomavirus infection," conclude the authors.

Provided by British Medical Journal

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