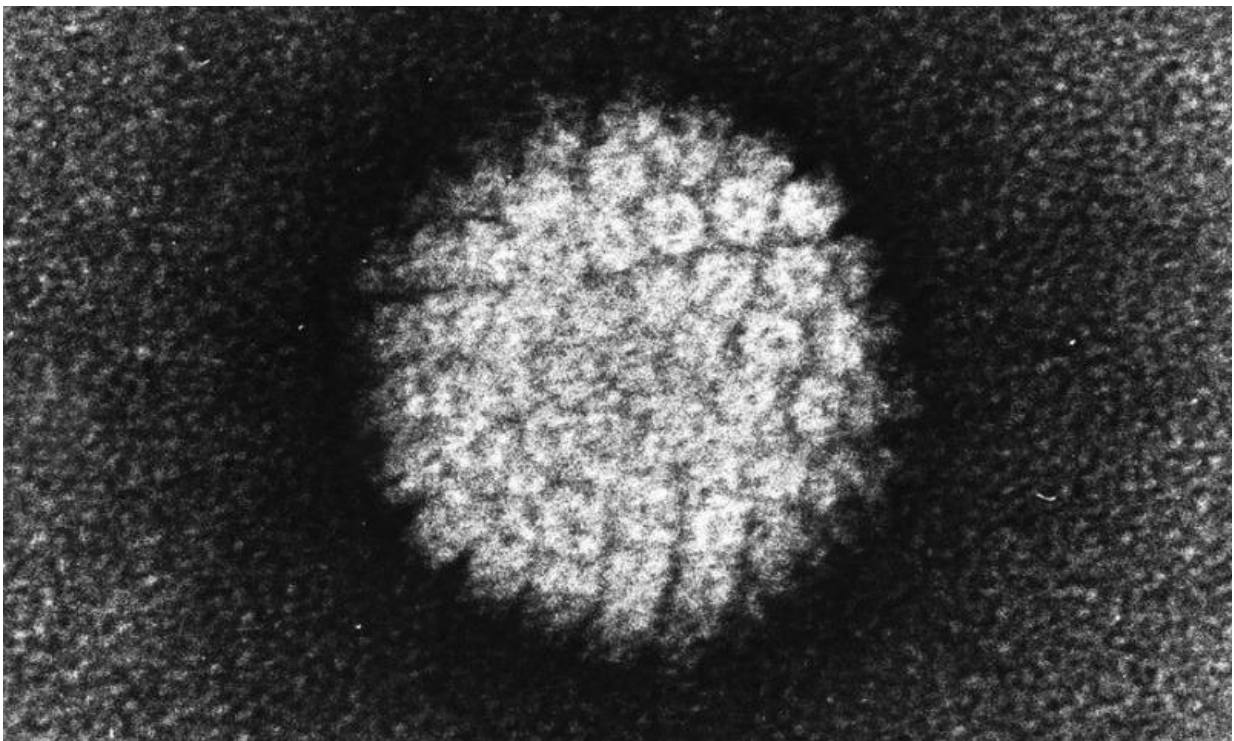


# Study examines using lubricant made with seaweed extracts to protect against HPV infection

April 6 2017, by Mary Ann Littell

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Electron micrograph of a negatively stained human papilloma virus (HPV) which occurs in human warts. Credit: public domain

A new study led by Rutgers clinician and researcher Mark Einstein is examining a revolutionary way to block transmission of human

papillomavirus (HPV), the organism that causes 99 percent of cervical cancers, using a topical gel applied during sexual activity. The product is a personal lubricant made with a formulation of seaweed extracts commonly referred to as carrageenans.

Positive results of the study would offer women the opportunity to protect themselves and their sexual partners against potentially deadly HPV [infection](#) through the simple application of an inexpensive, over-the-counter product. Funded by the National Cancer Institute, the study is being conducted jointly by Rutgers New Jersey Medical School and Albert Einstein College of Medicine.

HPV is easily transmitted through sexual contact, and nearly 80 million people – about one in four – are currently infected in the United States.

More than 12,000 women are diagnosed with [cervical cancer](#) each year in the U.S., and more than 4,000 of them will die of it. HPV is also linked to cancers of the vagina, vulva, penis, anus, and back of the throat, tongue and tonsils, in men and women.

"There are about 150 known types of HPV. It's a very common virus that alters the immune system to favor its own survival," says Einstein, who is professor and chair of New Jersey Medical School's Department of Obstetrics, Gynecology, & Women's Health. A specialist in cervical and other gynecologic cancers, he is the study's principal investigator.

"More than 80 percent of Americans will be infected with HPV in their lifetime, but in most cases, it never causes symptoms or illness – and certainly not [cancer](#) in most people," Einstein explains. "Persistent HPV – an infection that lasts more than 12 months – may be worrisome because the chances of developing a clinically relevant disease are much higher when the virus persists."

In the study, 100 sexually active women will be recruited and randomly assigned to receive either the lubricant with carrageenans or a lubricant without it, both packaged in single-use applicators. The women are asked to use the lubricant before and after [sexual activity](#). Participants will be tested monthly to determine how effectively lubricant with carrageenans can protect against HPV.

While great progress has been made in creating HPV vaccines, current approaches to prevent infection have limitations. Three HPV vaccines currently on the market provide strong protection against infection. However, the vaccines are effective only in those ages 26 and younger. "Carrageenans in a [lubricant](#) is a totally new approach to prevent HPV infection in those of any age," says Einstein. Because HPV is a [sexually transmitted infection](#), finding protection from a topical product used during sexual activity is a logical approach.

The concept of using the [topical gel](#) as an infection barrier has its roots in a 2006 study in which carrageenan was found to offer infection-inhibiting protection against a wide range of HPV types, including those that are known to cause cancer. All personal lubricants marketed and sold in the U.S. must be approved by the Food and Drug Administration (FDA).

Einstein, who is also assistant dean of the clinical research unit at New Jersey Medical School, has been an investigator on a number of HPV vaccine clinical trials and was on the guidelines writing group for the American Cancer Society and a consultant to the World Health Organization. "If effective, this approach can be a cheap, women-controlled way that can empower women to protect themselves from HPV and cervical cancer," says Einstein.

Provided by Rutgers University

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