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July 17, 2006

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A Vaccine that Prevents Cancer?

Most women are aware of Pap tests or Pap smears, which are used to diagnose cervical cancer in its early stages when treatment can be most effective. Early intervention is critical for this disease that affects over 10,000 American women every year and causes 3,700 deaths.

Relatively few women, however, have heard of human papillomavirus (HPV), the most common sexually transmitted disease.

More than 5 million new cases of HPV are diagnosed each year. It infects 50 percent of sexually active men and women, and may affect up to 80 percent of sexually active women by the time they reach age 50.

Additionally, up to 40 percent of sexually active adolescent girls are infected by this disease, which can cause cervical inflammation and genital warts.

The overwhelming majority of these infections will resolve spontaneously, but those that persist for years inflame the cervix and anogenital area causing cancer and venereal warts. HPV is now felt to be the major cause of cervical cancer.

There is a possibility that these numbers can be reversed, however. Imagine a time 30 or 40 years from now when cervical cancer is as rare an occurrence as chicken pox, polio, or meningitis.

At this extraordinary moment in time, there appears to be a vaccine that can prevent one of the most feared forms of cancer. If we begin universal vaccination in 2006, we should begin to see dramatic reductions in this disease by 2030.

In June 2006, the Center for Disease Control (CDC) licensed Gardasil - a vaccine for HPV -- recommending it be routinely administered to 11 and 12 year old girls, and eventually possibly to all females between the ages of 9 and 26.

In all probability, young males will be vaccinated, as well, when sufficient supplies become available.

Gardasil protects against four types of HPV, which cause the majority of infections that lead to cervical or rectal cancer. An additional vaccine, not yet licensed, is expected to be on the market in the near future.

With all its promise, Gardasil is not without controversy. This vaccine targets a sexually transmitted disease involving personal intimate contact. Many concerned individuals have also suggested that vaccinating young adolescents may promote sexual activity by the young and encourage promiscuity.

Vaccination is also expensive, requiring 3 shots for immunity, at a total cost of \$360. Many people are concerned about yet another vaccine expense, especially when it may be decades before we see a return on the investment.

Given the number of children at risk and requiring vaccination, both governmental agencies and insurance companies are hesitant to add another new, expensive vaccine to the coverage schedule.

In addition, many parents feel overwhelmed by all the vaccines currently available. Only a few years ago, vaccination was simple; doctors vaccinated against only a handful of diseases. Now physicians routinely vaccinate against more than a dozen potential diseases, with many more vaccinations available to address special circumstances.

Are vaccinations safe, necessary and effective? In the United States vaccines are carefully tested and I believe, as do the majority of my pediatric colleagues, that the answer to all three questions is "yes." As for vaccinating children against HPV, the newest medical breakthrough, the answer is also "yes" to a vaccine that promises to do away with a disease that has already led to the deaths of so many women.

Additional information that allows parents and families to make well-informed decisions can be found by contacting your pediatrician or on-line at www.aap.org. Feel free to contact me at NSMC North Shore Children's Hospital, 57 Highland Ave., Salem, MA 01907 or at ebailey@aap.org with your questions or comments.

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