Q My daughter was given the human papillomavirus vaccine at school. Does this mean she will not need Pap smears? I am interested as to whether she is fully protected now.

A It has been more than 60 years since Drs. Papanicolaou and Traut published their seminal paper on vaginal cytology in 1943. Since then, in developed countries, special programs for screening (the now famous Pap smears) have successfully reduced death rates from cervical cancer. By finding early stage lesions, the invasive, life-threatening forms of cervical cancer have largely been avoided. Nevertheless, infections with HPVs (human papillomaviruses) have not decreased, and because of sexual permissiveness, have, in fact, increased. The vaccine is active against the four most culpable viruses, but obviously not against all—nor will it be 100 percent effective. This means screening remains important, especially of those who have had more than one sexual partner or whose partner has had more than one sexual partner.

The interesting debate currently going on is whether the time-honored Pap smear is ready for archiving. It is a successful test and has a proven track record. It does require trained cytologists, and we believe it will never be totally discarded. Currently, a liquid phase-type of cytology is being used and is very accurate. What has happened to change the landscape with that is now it is easy to screen for the DNA of the HPV virus with a swab.

Two studies recently published in the same issue of The New England Journal of Medicine (October 18, 2007) tested the Pap smear versus the HPV test. Researchers found the HPV test to be more sensitive to the presence of the virus, but the Pap smear more specific to precancerous changes.

The question then is, Do we gain by greater sensitivity, even if it’s not as specific? The problem becomes one of economics. Which is more cost-effective: one test or the other—or both tests at the same time?

Follow-up on the presence of the virus when only mild cellular change exists may cost more than looking at cellular change from the outset and avoiding a lot of follow-up on mild change.

The exact recommendations will have to await more studies such as the two discussed here (one Canadian and one Swedish); but regardless, we are sure periodic screening for cervical cancer will persist. The vaccine may alter the scheduling of such screening,
but the effectiveness of the vaccine throughout prolonged years is another factor that has not yet been evaluated.

In a nutshell, the answer is that your daughter will need periodic screening, and we cannot say she is fully protected.

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While this column is provided as a service to our readers, Drs. Landless and Handysides unfortunately cannot enter into personal and private communication with our readers. We recommend that you consult with your personal physician on all matters of your health.