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Upfront

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HPV Test Best for Detecting Cervical Cancer

A test to detect the human papillomavirus (HPV), the virus that causes cervical cancer, is more sensitive, more effective, and easier to conduct than the traditional Pap smear. This test should be adopted as the worldwide standard for detecting HPV, reported the authors of a study appearing in the April 3, 2006, issue of the *International Journal of Cancer*.

"We are reporting many studies here, which are being brought together," said study author Jack Cuzick, the John Snow professor of epidemiology at the Centre of Epidemiology, Mathematics and Statistics at Cancer Research UK, Queen Mary School of Medicine, in London. "Hopefully, seeing the overwhelming effect of all results together will change practice."

Cervical cancer causes 300 000 or more deaths worldwide each year, with the most deaths occurring in areas where there is currently no screening at all. In the United States alone, some 10 400 women will be diagnosed with cervical cancer this year, and 3700 will die from the disease.

According to Cuzick, international implementation of the HPV test would greatly reduce the number of deaths caused by cervical cancer. He estimated a reduction of 50% above and beyond that achieved by the conventional Pap test in the United Kingdom. Cuzick believes the impact in the developing world would be even greater. "If this test could be applied there as well, 80% to 90% of cancers and deaths might be prevented."

HPV is one of the most common sexually transmitted diseases. An estimated 20 million men and women in the United States are infected with at least one type of HPV. According to the National Institute of Allergy and Infectious Diseases, there are high-risk and low-risk types of HPV. High-risk HPV may cause abnormal Pap smear results, and could lead to cancers of the cervix, vulva, vagina, anus, or penis. Low-risk HPV may also cause abnormal Pap results or genital warts.

Currently, early detection is the only way to prevent cervical cancer. However, researchers are close to finalizing a vaccine against HPV. "We are learning the viral implications of female genital tract malignancies," said Dr. Jay Brooks, chairman of hematology/oncology at the Ochsner Clinic Foundation in Baton Rouge, La. "In the future, this will be the way that individuals will be screened for the risk of many genital malignancies."

At this time, the gold standard test for cervical cancer involves collecting cells from the cervix via a Pap smear, then examining the cells under a microscope for abnormalities. In the study, this technique, which is known as cytology, had a sensitivity rate of 53%; HPV testing had a sensitivity rate of 96%. HPV testing was less specific for women under the age of 35, which lead to an increased number of false-positive readings for this age group.

The authors of the study feel it is "very realistic" to adopt this test worldwide. "Cheap forms of HPV testing are well into development to deal with cost issues in the developing world," said Cuzick. "In the developing world, the main barrier is inertia and an unfounded belief in the accuracy of cytology, which hopefully this paper will put to bed."

For more information about cervical cancer, please visit the American Cancer Society's Website at http://www.cancer.org/docroot/CRI/content/CRI_2_4_1X_What_is_cervical_cancer_8.asp or the National Institute of Allergy and Infectious Diseases Web site at <http://www.niaid.nih.gov/factsheets/stdhpv.htm>.

An Active Teen May Be a Safer Teen

Parents who have been looking for an alternative way to keep their teenager out of trouble may be in luck. Researchers at the University of North Carolina at Chapel Hill (UNC) found that teens who take part in many different kinds of physical activity - particularly with their parents - are less likely to get involved in high-risk activities, including drinking, drugs, and violence than teens who spend a lot of time in front of the television.

"Adolescents who spend a lot of time watching TV or playing computer video games tend to be at higher risk for engaging in all of these risky behaviors," said study co-author Dr. Penny Gordon-Larsen, assistant professor of nutrition, a department housed jointly in UNC's schools of public health and medicine, and a fellow at the Carolina Population Center.

The study, which was published in the April issue of the journal *Pediatrics*, compared 7 distinct clusters of adolescents, defined according to the types of physical or sedentary activities they participated in on a day-to-day basis.

Examples of clusters include:

- Adolescents who frequently played sports with their parents, who also spent a lot of time playing sports overall;
- Skaters/gamers, who did a lot of skating, skateboarding, bicycling and playing video games;
- High TV/video viewers, who made their own decisions about TV viewing and did a lot of it;
- Teens who often use neighborhood recreation centers; and
- Adolescents who often participated in school activities, including sports, clubs and physical education.

The study also asked questions about self-esteem, finding that the teens who were less physically active tended to have lower self-esteem. The remaining clusters were groups of adolescents who often used community recreation centers, as well as the group who participated frequently in school activities. Both also tended to have high self-esteem, compared to adolescents who watched a lot of TV.

This study revealed that kids who focused on fitness and activity were less likely to take up drinking, illicit drug use, violent behavior, sex and delinquency. On the other hand, the researchers found that adolescents who spend a lot of time watching TV or playing computer video games tend to be at higher risk for engaging in risky, unsafe behavior.

"Anything we can do to get kids to be physically active will help them in terms of their physical health, but this research suggests that engaging in a variety of activities may also have social, emotional, and cognitive benefits, including reduced likelihood of engaging in risky behaviors such as drinking, drugs, violence, smoking, sex, and delinquency," Gordon-Larsen added.

The current study also asked questions about self-esteem, finding that the teens who were less physically active tended to have lower self-esteem. The remaining clusters were groups of adolescents who often used community recreation centers, as well as the group who participated frequently in school activities. Both of these groups tended to have high self-esteem in comparison to the adolescents who watched a lot of TV.

The study also found the skaters/gamers to be at a relatively low risk, which may seem surprising given the bad rap skateboarding generally receives because schools don't generally sponsor it, many public places ban it, and not a lot of adults participate in it. "But we found that adolescents who skateboard actually fared well in terms of self-esteem and were less likely to engage in risky behaviors compared to teens who watch a lot of TV," Gordon-Larsen said.

"I think that parents should find ways to participate in sports and physical activities with their children," Gordon-Larsen said. "So, instead of having family TV time, build in time that the family is together and active. It's also extremely important for communities and schools to provide safe and affordable recreation facilities and opportunities for physical activity."

Although activity patterns among teens have been studied in the past, this study focused on the many benefits of physical activity. "Our previous research revealed physical activity and sedentary behavior patterns that vary among teens, and these activity patterns go beyond highly active and not active," said first author Dr. Melissa C. Nelson, who received her doctoral degree from UNC and now is assistant professor of epidemiology and community health at the University of Minnesota.

Researchers are still trying to understand all of the benefits of being active, according to Nelson. "This research leads us to believe that those benefits extend well beyond physical fitness. It could be that active teens are being exposed to more opportunities for team-building, engaging in more social interactions with others, or seeing the benefits of hard work and practice."

"We also suspect that all teens might not benefit similarly from the same kind of activity - it's not a one-size-fits-all kind of thing. Helping to provide kids with the opportunity to get involved in any number of physical activities, instead of staying at home and watching TV, may provide a kind of resilience against engaging in these other risky behaviors."

Cocoa Intake Associated with Lower BP and Cardiovascular Mortality

Although it has often been said that the key to a woman's heart is chocolate, Dutch researchers recently found that chocolate may also be the key to a healthy heart.

Sipping a cup of hot chocolate, or eating a candy bar, has been associated with reduced blood pressure for older men in Holland and a reduced risk of cardiovascular and all-cause mortality, reported the researchers in the February 27, 2006, issue of *Archives of Internal Medicine*.

Cocoa, which is rich in flavanols, has been associated with heart health since the 1700s; however, scientific evidence is now available to back this claim. "To our knowledge, this is the first epidemiological study to report an inverse relationship of cocoa intake with blood pressure and cardiovascular and all-cause mortality," said Brian Buijsse, MSc, and colleagues at the National Institute for Public Health and the Environment, Bilthoven.

The research team examined links between cocoa and cardiovascular health in 470 men ranging from 65 to 84 years of age. The men had physical examinations and were interviewed about their diet at the start of the study in 1985, and then again in 1990 and 1995. The researchers concluded that over a 15-year period, men who ate cocoa regularly - including chocolate - had significantly lower blood pressure compared with those who did not consume cocoa on a regular basis.

The delectable treat might even help ward off death. Over the course of the study, 314 men died, with 152 of those deaths blamed on heart disease. The men who consumed the highest amount of cocoa were half as likely to die from cardiovascular disease as those who ate little or no cocoa. Furthermore, men who ate the most cocoa were less likely to die from any causes.

The Dutch team said that the decrease in cardiovascular deaths could not be attributed to lower blood pressure. The decrease in cardiovascular mortality could perhaps be related to the improvement in endothelial function by flavan-3-ols in cocoa. Cocoa products may also inhibit platelet function and low-density lipoprotein oxidation, which could also account for the decrease in cardiovascular-related deaths.

"Cocoa is the most concentrated source of bioflavonoid antioxidants readily available in our diets," said Dr. David L. Katz, an associate professor of public health, and director of the Prevention Research Center at Yale University School of Medicine. However, moderation is vital, warned Katz. "Cocoa comes in foods that tend to be energy-dense, and the harm of excess calories could readily offset the benefit of antioxidants."

Katz also stressed that cocoa's heart-healthy benefits only come from bittersweet dark chocolate and in concentrated cocoa beverages, which contain an effective dose of antioxidants, along with magnesium, arginine, and fiber.