

Stress may increase a woman's risk of developing cervical cancer

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A woman's daily stress can reduce her ability to fight off a common sexually transmitted disease and increase her risk of developing the cancer it can cause, according to a new study. No such association is seen, however, between past major life events, such as divorce or job loss, and the body's response to the infection.

Human papillomavirus (HPV) is spread during sexual intercourse. The most common subtype of the virus is HPV16. Infection with HPV16 and other HPV subtypes can cause cervical cancer.

"HPV infection alone is not sufficient to cause cervical cancer," explained Fox Chase Cancer Center's Carolyn Y. Fang, Ph.D. "Most HPV infections in healthy women will disappear spontaneously over time. Only a small percentage will progress to become precancerous cervical lesions or cancer. An effective immune response against HPV can lead to viral clearance and resolution of HPV infection. But some women are less able to mount an effective immune response to HPV."

Fang and her colleagues hypothesized that stress could lead to alterations in immune functioning that make the body less able to effectively clear the virus. Their study exploring this hypothesis appears in the February issue of *Annals of Behavioral Medicine* (volume 17, number 1).

In the study, researchers examined potential associations between stress and immune response to HPV among women who had precancerous cervical lesions. The women were asked to complete a questionnaire

about their perceived stress in the past month and about major stressful life events that had occurred, such as divorce, death of a close family member or loss of a job.

“We were surprised to discover no significant association between the occurrence of major stressful life events and immune response to HPV16. This could be due to the amount of time that has passed since the event occurred and how individuals assess and cope with the event,” said Fang. “Our findings about subjective daily stress told a different story, however. Women with higher levels of perceived stress were more likely to have an impaired immune response to HPV16. That means women who report feeling more stressed could be at greater risk of developing cervical cancer because their immune system can’t fight off one of the most common viruses that causes it.”

Source: Fox Chase Cancer Center

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