

# Preventing Cervical Cancer: Strategies and Solutions for Women's Health

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## DESCRIPTION

Cervical cancer is a significant public health concern that affects women around the world. This cancer arises from the cervix, the lower part of the uterus that connects to the vagina. While it's one of the most preventable and treatable forms of cancer, it still poses a considerable threat to women's health, particularly in developing countries where access to healthcare and preventative measures is limited.

This article aims to provide a comprehensive overview of cervical cancer, including its causes, risk factors, prevention strategies, diagnosis, and treatment options.

## Understanding cervical cancer

Cervical cancer is primarily caused by the Human Papillomavirus (HPV), a common sexually transmitted infection. In most cases, HPV infections resolve on their own without causing any harm. However, certain high-risk HPV types can persist and lead to cervical cell abnormalities that may ultimately develop into cancer. It is essential to understand the factors that contribute to cervical cancer.

**HPV infection:** As mentioned earlier, the most significant risk factor for cervical cancer is persistent infection with high-risk HPV types. HPV vaccines have been developed to protect against these viruses and have proven to be highly effective in preventing cervical cancer.

**Smoking:** Smoking is another risk factor for cervical cancer. Women who smoke are at a higher risk because tobacco by-products can damage DNA and make it more susceptible to HPV infection.

**Immunosuppression:** Weakened immune systems, whether due to HIV/AIDS, organ transplants, or certain medications, can increase the risk of cervical cancer. An efficient immune system is crucial for clearing HPV infections.

**Multiple sexual partners:** Having multiple sexual partners or having a partner with multiple sexual partners can increase the risk of HPV transmission.

**Early sexual activity:** Women who start sexual activity at a young age may be more vulnerable to HPV infections because their cervical cells are not fully matured.

## Prevention strategies

Preventing cervical cancer involves a combination of vaccination, regular screening, and lifestyle choices. The most effective preventive measures include in below.

**HPV vaccination:** HPV vaccines, such as Gardasil and Cervarix, are available and recommended for both males and females. These vaccines are highly effective in preventing HPV infections and the subsequent development of cervical cancer. It's essential to get vaccinated before becoming sexually active.

**Regular screening:** Routine cervical cancer screening is crucial for early detection and prevention. The Pap smear (Papanicolaou test) and HPV testing are the most common methods. The Pap smear identifies abnormal cervical cells, while HPV testing detects the presence of high-risk HPV types. Regular screenings can detect pre-cancerous changes in the cervix, allowing for early intervention.

**Safe sexual practices:** Using barrier methods, such as condoms, can reduce the risk of HPV and other sexually transmitted infections. Reducing the number of sexual partners can also decrease the risk.

**Smoking cessation:** If you smoke, quitting can lower your risk of developing cervical cancer. Smoking not only increases the risk of infection but also exacerbates the progression of the disease.

**Early sexual education:** Promoting sexual education that includes information about the risks of HPV and the importance of vaccination can help young individuals make informed choices.

## Diagnosis and staging

Early diagnosis is crucial for successful cervical cancer treatment. When cervical cancer is suspected, healthcare providers use various tests and procedures to confirm the diagnosis and determine the stage of the cancer. Staging is essential as it guides treatment decisions and predicts the prognosis.

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**Received:** 03-Nov-2023, Manuscript No. JCRIO-23-27598; **Editor assigned:** 06-Nov-2023, PreQC No. JCRIO-23-27598 (PQ); **Reviewed:** 20-Nov-2023, QC No. JCRIO-23-27598; **Revised:** 27-Nov-2023, Manuscript No. JCRIO-23-27598 (R); **Published:** 04-Dec-2023; DOI: 10.35248/2684-1266.23.9.199

**Citation:** Galula F (2023) Preventing Cervical Cancer: Strategies and Solutions for Women's Health. J Cancer Res Immuno-oncol. 9:199.

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**Physical examination:** The first step is a pelvic examination. The healthcare provider visually inspects the cervix and may perform a Pap smear or collect a sample for HPV testing.

**Colposcopy:** If abnormalities are found during the pelvic exam or through Pap smear results, a colposcopy may be performed. This procedure uses a special magnifying instrument to examine the cervix closely. If necessary, a biopsy may be taken during the colposcopy to confirm the presence of cancerous cells.

**Imaging studies:** To determine the extent of cancer and whether it has spread to other organs, imaging studies such as CT scans, MRI, and PET scans may be conducted.

**Staging:** The final step is cancer staging, which is typically based on the International Federation of Gynecology and Obstetrics (FIGO) system. Staging involves determining the size of the

tumor, its spread to nearby tissues, lymph nodes, and distant organs.

### Cervical cancer stages

**Stage 0:** Precancerous lesions or carcinoma in situ (only present in the top layer of cells).

**Stage I:** Cancer is confined to the cervix.

**Stage II:** Cancer has spread beyond the cervix to nearby structures.

**Stage III:** Cancer extends to the lower third of the vagina or to the pelvic wall.

**Stage IV:** Cancer has spread to distant organs such as the bladder, rectum, or other distant sites.