Genital Warts and Alferon N Injection® [interferon alfa-n3 (human leukocyte derived)]

**What are genital warts?**

Genital warts (condylomata acuminata or venereal warts) are one of the most common types of sexually transmitted diseases (STDs) in the United States. They affect the moist tissues of the genital area, and may look like small bumps or have a cauliflower-like appearance. If left untreated, genital warts may go away, stay the same, or grow in size or number.

**What causes genital warts?**

Genital warts are caused by a virus called the human papillomavirus (HPV), which infects the top layers of your skin. They can spread by having sex with someone who has the virus. The strains of HPV that cause genital warts are very contagious. Once infected, genital warts usually begin to appear within 3 months, but can vary between weeks to years. The virus can still spread even if you do not see the wart.

**Who gets genital warts?**

Both men and women can get genital warts. You have a greater chance of getting infected with the virus if you have unprotected sex or have many sexual partners. You are also more likely to get genital warts if you already have another STD, have sex with someone whose sexual history you do not know, or start having sex at very young age.

**What are the symptoms of genital warts?**

- Genital warts may look like small, flesh-colored or gray bumps in the genital area. Several warts may cluster together and have a cauliflower-like appearance.
- Often, there are no symptoms. You should contact your doctor if you have any of these symptoms:
  - Discomfort or itching in the genital area.
  - Bleeding during or after sex.
  - Vaginal discharge.
How can I avoid spreading genital warts to other people?\textsuperscript{1-4}

- Even though you may not experience any symptoms, you can still spread this virus to your sex partner. Therefore, it is important to practice safe sex:
  - Talk to your partner about STDs before starting a sexual relationship.
  - Limit the number of sex partners.
  - Using condoms may lower the chance of getting the virus. Condoms may not cover all areas infected by the virus so they may not fully protect you.
  - Rarely, genital warts grow in the mouth or throat of a person who had oral sex with an infected person. Avoid oral sex when possible.
  - Avoid sexual contact until the warts are gone.
  - Inform your sexual partner if you have genital warts because he or she should be screened and treated if necessary.

Can genital warts be prevented?\textsuperscript{5}

Gardasil\textsuperscript{®} (Human Papillomavirus Recombinant Vaccine Quadrivalent) can be used by men and women between the age of 9 and 26 years to prevent getting genital warts caused by certain types of HPV. The vaccines are given in a series of 3 injections over a 6 month period. Since Gardasil does not protect against all strains of HPV that cause genital warts, it is still important to practice safe sex even if you received the vaccine.

What treatments are available for genital warts?\textsuperscript{6,7}

There is no cure for genital warts. Medicines or surgery can be used to clear the visible genital warts. Surgery is generally used for larger warts, warts that do not clear up with medicines, or if you are pregnant. However, the virus cannot be completely killed and the warts may come back after treatment, especially in the first 3 months. You should never use over-the-counter medicines to treat genital warts.

- **Medicines that can be applied by you**
  - Aldara\textsuperscript{®} (imiquimod) – A cream that boosts your immune system’s ability to fight genital warts.
  - Condylox\textsuperscript{®} (podofilox) – A solution or gel that destroys genital wart tissue.
  - Veregen\textsuperscript{®} (sinecatechins) – A botanical ointment made with green tea leaf extracts.

- **Medicines that have to be given by your doctor**
  - Alferon N Injection\textsuperscript{®} [interferon alfa-n3 (human leukocyte derived)] – An injection that attacks viral infections.
• Bichloroacetic acid (BCA) or trichloroacetic acid (TCA) – Chemical treatments used to burn off genital warts.
• Cryotherapy – Freezing the wart with liquid nitrogen causing the wart to fall off.
• Podofin (podophyllin) – A resin that removes genital wart by stopping cell growth.

• Surgery
  • Electrocautery – Using an electrical current to burn off warts.
  • Laser treatments – Using beam of light to burn and destroy the wart tissues. This is saved for very hard-to-treat warts.
  • Surgical excision – Removing the warts using special tools.

Can anyone get an Alferon N Injection?7

Alferon N Injection is helpful if medicines or surgery did not work for you. You should not use Alferon N if:
• You are less than 18 years of age.
• You have anaphylaxis reaction to any of the following:
  • Egg protein
  • Neomycin
  • Mouse immunoglobulin (IgG): Bexxar® (tositumomab), Zevalin® (ibritumomab tiuxetan)
  • Interferon-alpha: Intron®-A (interferon alfa-2b, recombinant), Roferon-A (interferon alfa-2a, recombinant)
• Women of childbearing age should use effective birth control methods while being treated with Alferon N

How do I use Alferon N Injection?7

Only a trained doctor or nurse can inject Alferon N. Alferon N is injected directly into the base of the wart 2 times per week for up to 8 weeks. It is important that you keep all of your doctor appointments. Genital warts usually begin to disappear after several weeks of treatment. Unless your warts get bigger or new warts appear, Alferon N injection should not be used for 3 months after your first course of treatment. A second course of treatment has not been shown to be safe or effective in treating genital warts. If you have any questions about re-treatment, please talk to your doctor.
How should Alferon N Injection be stored?

Alferon N Injection should be stored in the refrigerator at 2°C to 8°C (36°C to 46°F). Never freeze or shake the medicine.

What other resources are available for genital warts?

For more information on genital warts or Alferon N Injection, please contact the following resources:

**OptumRx**
Phone: 1-888-702-8423
Website: www.optumrx.com

**American Social Health Association**
Phone: 1-919-361-8400
Website: http://www.ashastd.org/hpv/hpv_overview.cfm

**Centers for Disease Control and Prevention (CDC)**
Phone: 1-800-CDC-INFO (1-800-232-4636)
Website: www.cdc.gov/STD/HPV/default.htm

**NIH/National Institute of Allergy and Infectious Disease (NIAID)**
Phone: 1-866-284-4107
Website: www3.niaid.nih.gov/topics/genitalWarts

**ALFERON Access Program™**
Phone: 1-888-ALFERON (1-888-253-3766)
Website: www.hemispherx.net/content/products/

References:


The information in this educational handout doesn’t substitute the medical advice, diagnosis, or treatment provided by your doctor. Always seek the help of your doctor or a qualified health provider for any questions about your medical condition.