Cervical Dysplasia

For Women Newly Diagnosed with Cervical Dysplasia and HPV.

Sister Zeus
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www.sisterzeus.com
A high percentage of women receiving the news that they have cervical dysplasia and that it could progress to cancer react very fearfully, some describe leaving the doctors office “numb with fear”.

Many of these women join the Cervical Dysplasia support group on Yahoo! describing themselves as: panicked, freaked out, scared out of their minds.

Some are fearful of cancer, others are concerned about preserving their fertility. It is very rare that they come into the group knowing that there are effective alternative treatments.

The good news is, cervical dysplasia is 100% treatable.

Cervical dysplasia is not only a cervix problem, it is a whole body issue. Let’s look at the problem and what we can do about it.
What is Cervical Dysplasia?

- Cervical dysplasia is a condition where the cells of the cervix grow abnormally.
- The abnormal cells are normally discovered on routine pap smears.
- The development of cervical dysplasia has been linked to human papilloma virus (HPV) infection.
- Cervical dysplasia has been linked to the development of cervical cancer.
- Cervical dysplasia is completely treatable, and is not cancer.
If left untreated, depending on the severity of the abnormal cells, they may:

- Revert to normal.
- Stay the same.
- Slowly worsen with possible progression to cancer.

It is important to monitor the situation by getting regular PAP Smears.

Generally, the progression to cancer is slow, occurring over approximately 10 to 15 years.

- However, the presence of HPV types 16 & 18 can cause a more rapid progression to cancer. Progression may occur in as little as 18 months.
- Not all types of HPV are linked to the development of cervical cancer.
How do you get Cervical Dysplasia?

Factors Increasing the Risk for Cervical Dysplasia

- HPV infection (sexually transmitted virus).
- Irregular usage of condoms.
- Having multiple sex partners.
- Engaging in sexual intercourse at a young age.
- Giving birth before the age of 22.
- Cigarette smoking.
- Birth Control Pills.
- Low socioeconomic status.
- Inadequate intake of folic acid.
- Family history of cervical cancer.
- DES Daughters are at a higher risk for developing rare vaginal and cervical cancers.
Detecting HPV

The most common cause of cervical dysplasia is HPV.

- HPV is a sexually transmitted virus.
- HPV rarely has symptoms.
  - Unless it causes warts.
- Cells in a pap smear may have characteristic changes consistent with the presence of HPV.
- Some labs have the ability to DNA test pap smear samples to help identify which strains of HPV are present. Speak to your doctor about the possibility of typing the strain.
- Currently there is no form of standardized testing available to identify the presence of HPV in men. A doctor may do a visual exam and apply a vinegar solution to look for changes.
Most who have HPV do not know they carry the virus. Approximately 70-75% of the sexually active population has been infected with the human papilloma virus. There are about 100 different strains of HPV that affect the human body. HPV is a wart virus, however not all strains of the virus will produce warts. Some warts may be too small to be seen with the naked eye. There are approximately 30-40 strains of HPV that affect the genital areas of men and women. While other strains of the virus produce warts on the hands, feet and other areas of the body. HPV is transmitted through skin to skin contact. Condoms provide some protection from sexually transmitted strains of HPV but do not provide 100% protection.
There are about 40 strains of HPV which affect the reproductive tract. There are 13 strains of the virus which are considered high risk. Two of those (16 & 18) are believed to be responsible for 70% of all cervical cancer. Low risk strains are considered unlikely to progress to cervical cancer. Strains 6 & 11 are most likely to cause outbreaks of genital warts.
These 4 strains of HPV are Responsible for Most Cases of Cervical Cancer.

“Approximately half of all cervical cancers in the U.S. and Europe are caused by HPV 16, with type 18 causing ~15%, and types 31 and 45 accounting for an additional ~10% of cervical cancer cases worldwide. In addition to differences in prevalence, these types also vary in their risk estimates (oncogenic potential) for squamous cell carcinoma of the cervix. This is represented by the differences in the odds ratios (OR) between the four types, with HPV 16 carrying the greatest risk.” [Muñoz, 2003]

**International Agency for Research on Cancer (IARC)**


OR = Odds Ratio

Knowing what strain of the virus you have can be useful information when tailoring treatment to the individual.
Am I going to get Cancer?

Statistically, the odds are in your favor. Only a very small percentage of cases of cervical dysplasia actually progress to cancer.

- Even if you have a high risk strain, there are at least 13 different high risk strains, it doesn’t mean you have the worst one (type 16).
- The best way to get cancer? Ignore the problem, abuse yourself and hope it goes away.

You also have a say in what happens next. Lifestyle and dietary choices do have an impact on cervical health.
Is it possible to suppress the virus? At this time there is conflicting information.

- Some sources say, once you have the virus... you always have the virus.
- While other sources including Planned Parenthood say, in some individuals the body is able to suppress or even clear the virus. They also state that the virus can be suppressed in the body for years and re-emerge to cause problems years later.
  - The problem is, we don’t know who has cleared the virus, who has suppressed the virus or when it will reappear.

I think it’s safe to say, we don’t know for sure, and it may vary between individuals. It is safest to err on the side of caution.

- Other thoughts on viral infection.
  - We know that with a herpes infection, that the virus may go dormant and reactivate during times of stress, etc.
  - We know that many women have good pap smear results for years after being treated for cervical dysplasia only to have it return later on.
    - Is this because they are reinfected?
    - Is it because the virus becomes active, or the immune system can’t keep it in check?
You’ve Had an Abnormal PAP Smear Result....

Now what? What does it mean?
There are two grading systems that has evolved over the years signifying the severity of cervical dysplasia. These two systems are sometimes used interchangeably and is not uncommon to see mention of both systems on PAP Smear test results for further clarification of test results.

- CIN I, CIN II, and CIN III
- LSIL or HSIL

In addition to a normal test result, the other result possible is ASCUS (Atypical Squamous Cells of Undetermined Significance) also called atypia. The cells look unusual, or funny but are not abnormal enough to be called dysplastic. This is not a significant problem if dysplasia has been ruled out through a colposcopy.
CIN (Cervical Intraepithelial Neoplasia)

- CIN I – mild dysplasia. (LSIL)
- CIN II – moderate dysplasia. (HSIL)
- CIN III – severe dysplasia. Carcinoma-in-situ. (HSIL). In the past, carcinoma-in-situ was classified as more serious and treated as such. Today, carcinoma-in-situ and severe dysplasia are classified as CIN III.
- Note: Carcinoma-in-situ is not invasive cancer.
**Low Grade vs. High Grade**

This system was developed to give indication statistically which cases of dysplasia are likely to go away on their own vs. those that would be more likely to progress. This is the newest system in use.

Statistically, mild dysplasia is more likely to go away on its own, whereas severe dysplasia is more likely to progress. This classification system is based on this premise.

- **LSIL (Low-grade Squamous Intraepithelial Lesions)**: Mildly abnormal cells, HPV is usually present. Frequently, the abnormal cells will become normal on their own.

- **HSIL (High-grade Squamous Intraepithelial Lesions)**: Moderately to severely abnormal cells. More likely to progress towards cancer without treatment.
Examples of Cells on a PAP Smear Slide

What someone at the lab might see....
**Dysplasia.** The frequency of abnormal cells indicates this is a more severe case than the previous images. The absence of cytoplasm, the swollen nuclei plus the absence of normal cells signal more advanced severe dysplasia.
Introducing the Cervix

What Happens with HPV Infection
The cervix is the lower portion of the uterus which extends into the vaginal canal.

The cervix may be viewed using a speculum to separate the walls of the vagina.

During pregnancy, the cervix is the muscle which holds the baby in the womb.

During birth the baby will pass through the cervix and vagina to enter the world.

The endocervical canal is located between the inner and outer os.
Healthy Cervix Cells

- The cervix is composed of several layers of densely packed cells.
- This arrangement of stratified squamous epithelial cells provides protection from invasion from microorganisms.
- The lower layers are composed of small tight round cells, which flatten out as they age moving closer to the surface.
- As the cells move upward the nucleus decreases in size eventually disappearing as the cells reach the surface.
Squamous Epithelium

Normal cervical tissue
Exposure to the Virus

- Exposure occurs when intimate contact occurs, skin on skin.
- Exposure occurs when condoms are not used during intercourse with an individual who carries the virus.
- Once exposure to the virus occurs, a variety of things may occur.
  - Your body may fight off the virus and you’ll never know you had it.
  - The virus may lay dormant for many years and you won’t know you have it. Only to become active during a time of stress causing changes in the cervix cells, which can be detected later in a pap smear.
  - The virus may present but the immune system keeps it in check.
  - As a result of exposure some may present with symptoms. Symptoms will depend on the strains of the virus present. It may take 6 months or more for symptoms to develop.
    - The appearance of genital warts (men and women).
    - The development of abnormal cells in the cervical tissue. These abnormal cells are normally detected on a woman’s annual pap smear.
Cofactors that may Contribute to the Development of Cervical Dysplasia

When exposed to the virus, certain factors may make it more likely that an HPV infection results from the exposure.

- Smoking.
- Drug abuse.
- Nutrient deficiencies.
- Immune deficiency.
- Possibly oral contraceptive use.
- Engaging in intercourse at a young age (18 or younger).
- Giving birth before the age of 22.
Symptoms of HPV Infection

- Generally, there are no symptoms or indications that you have acquired the human papilloma virus.

- When affected by a strain of HPV which produces genital warts, warts may be the only indication of a present infection.

- Not all strains of HPV produce warts. Generally, the ones that do not produce warts are the ones that will adversely affect cervix cells.

- HPV is normally detected in women on a routine PAP Smear.
HPV infection occurs most frequently from engaging in intercourse without a condom.

HPV affects the cells of the cervix causing abnormal cell development.

Normal Cervix Cells on the left, with HPV infected cells shown on the right.

HPV infection, histology. Notice the dark, raisin-like nuclei surrounded by halos. (1)
Mild Dysplasia (CIN 1)

- When a few cells develop abnormally, this is called mild dysplasia.
- Approximately 70% to 80% of cases of mild dysplasia will clear up on their own within one year.
- Some doctors like to treat in this stage to prevent it from progressing. This involves cutting, burning, or freezing the cervical tissue.
**Moderate Dysplasia (CIN II)**

A greater number of cells are present in moderate dysplasia. Up to 50% of the thickness of the surface lining of the cervix may be involved.
Severe Dysplasia (CIN III)

- Also called carcinoma-in-situ.
- Abnormal cells are found throughout the thickness of the surface layer of cervix cells.
- The abnormal cells have not spread below into the basement membrane or beyond.
- Carcinoma “in situ” is not invasive malignancy, but rather an extension of the immature basal cells to the very top of the tissue thickness. It does carry with it an increased risk of progression to invasive cancer, it too is completely treatable.(2) This is the beauty of early detection.
**Cervical Cancer**

- Abnormal cells have invaded the tissues below the basement membrane.
- This is invasive cancer. Depending on how deeply the cancerous cells have invaded determines the course of treatment.
Progressive Deterioration of Cervical Tissue

Tissue Effects of HPV Infection

- Normal
- Condy/CIN 1
- CIN 3
- Cancer

HPV
Confirming Diagnosis

What happens after you get an abnormal pap.
Typically, the next step is a colposcopy and take samples (biopsies) of any abnormal tissue found. The tissue samples of the cervix taken will be analyzed to determine the severity of the dysplasia and determine recommended course of treatment. Doctors will discuss surgical options to treat “pre-cancerous” cells. This is very frightening for most women, greatly adding to the anxiety and stress of the whole situation.
Colposcopy

A colposcope is a machine that is used to luminate and magnify the cervix. Many of the machines are able to capture and print images taken during the colposcopy examination.

Several diagnostic tests are used during the examination to identify abnormal tissue, allowing the doctor to determine what areas to biopsy.
Colposcopy Examination of CIN II & III

Cervix under normal light

Cervix under blue light to identify abnormal blood vessels.

Cervix with vinegar solution applied. White areas show epithelium with increased nuclear density.

Cervix with iodine solution. Newer tissue does not absorb the iodine as well and appears lighter. CIN appears as mustard yellow or saffron-colored areas when stained with iodine.
Once abnormal tissue is identified, biopsies may be taken from those areas for further analysis.
Once the results from the biopsies are in, your doctor will make recommendations for treatment. Standard methods of treatment generally include one of the following based on biopsy results:

- Watch and wait
- Surgery
  - LEEP
  - Cryotherapy
  - Laser cone
  - Laser ablation
  - Cone biopsy
  - Conization
  - Hysterectomy
Get a Second Opinion

Whenever faced with a serious health issue that may require surgery it is often wise to seek a second opinion.

Find and work with a doctor you trust. If for any reason, you are uncomfortable with your doctor or the service they provide, find another one!

Talk to individuals who have faced similar issues.

Join a support group.

Educate yourself.
Cervical dysplasia responds very well to alternative treatments. The treatment protocol put forth by Tori Hudson, ND. is very effective at treating even severe dysplasia. This is an excellent choice if the individual is motivated and willing to adhere to the program.

If working with an ND is an option you would like to explore, having pictures of your colposcopy and copies of your medical reports can be helpful in determining the course of treatment. It also gives the ND you choose to work with a visual of where the abnormal tissue is located, useful for topical applications.
Treatment Options

Should be determined by gathering the data and making an informed choice.
Researchers looked at outcomes of women diagnosed with cervical dysplasia who “watched and waited”.

However, doing nothing is not recommended.
Surgical Treatments

Treatments offered by your doctor are effective at removing and/or destroying abnormal cervical cells.

With most treatments, women should expect to avoid intercourse for a period of time while healing occurs.

Women frequently experience bleeding and/or discharge for several weeks while the cervix heals.

Some surgical options can impact future fertility.

Surgery successfully removes abnormal tissue but does not prevent the development of more abnormal cervix cells.

Treatment options include:

- LEEP – cutting away portions of the cervix (tissues are reserved and examined later).
- Cryotherapy – freezes the face of the cervix causing damaged tissue to slough off.
- Laser therapy – vaporizes tissues.
- Cone Biopsy/Conization – cuts away a portion of the endocervical canal, tissues may be evaluated further.
- Hysterectomy – removed the uterus including the cervix. The ovaries are left behind. Women still need to have pap smears and dysplasia can return even without the presence of a cervix.
LEEP (Loop Electrosurgical Excision Procedure)

- LEEP is one of the most commonly used methods of treatment.
- Performed in the doctor’s office, using an electrical current to assist in cutting away the abnormal tissue and some healthy tissue as well.
- Examination of the tissue removed can confirm the removal of all the abnormal tissue and confirm the absence of invasive cancer.
- Women treated with LEEP are more likely to convert to HPV negative status in 1-2 yrs.(3)
Some women have reported slow healing, pain and infection following treatment for cervical dysplasia.

A few women experience prolonged bleeding or spotting.

Some women experience pain with intercourse after a period of time sufficient for healing.

Certain procedures such as LEEP and cone biopsies can affect a woman’s ability to carry future pregnancies to term, especially if a woman has more than one LEEP or cone biopsy done.

If this problem develops during pregnancy, a stitch (cerclage) is placed in the cervix to keep the cervix closed and prevent miscarriage or preterm delivery.
**Naturopathic Treatment**

- Treatment focuses on:
  - Reduce exposure to the human papilloma virus.
  - Reduce cofactors as much as possible (risky behavior, obesity, smoking, birth control pill use, etc).
  - Correct nutritional deficiencies.
  - Improve local immune response.
  - Strengthen overall immune health.
  - Prevent progression to cervical cancer.
  - Treatment protocols may include supplementation, dietary and lifestyle changes and topical applications such as suppositories and Escharotic treatment.
Topical Treatments

A key piece for healing CIN II & III available through your local Naturopathic Doctor
A variety of vaginal suppositories are available through your local ND to address cervical dysplasia. Options available include:

- Antiviral suppositories: Vag Pak
- Soothing and healing suppositories: Vitamin A and Calendula.
- Green Tea Suppositories

The use of suppositories can also be helpful following surgical treatment.

- The use of Vitamin A and herbal suppositories 3 weeks after LEEP, Conization or Cryotherapy can assist in healing the cervix.
**Escharotic Treatment**

- A topical caustic treatment applied to the cervix to remove abnormal cells.
- A mixture of zinc chloride and bloodroot (*Sanuinaria canadensis*) is applied to the cervix to cause the sloughing off of abnormal tissue.
- After application, the mixture is carefully washed off with a calendula solution and followed with suppositories.

Please note: I feel strongly that anyone attempting to heal cervical dysplasia by using alternative treatments, needs to incorporate escharotic treatments into their program to increase likelihood of successful treatment especially if CIN II or III is present.
Decide Your Method of Treatment then Embrace it!
Being Proactive about Cervical Dysplasia...

Whether you opt for surgery or an alternative approach, the following suggestions will help to heal the cervix and prevent recurrence. There's lots you can do!
“Cervical dysplasia is both a local problem involving cervical tissue immunity and health and a systemic problem involving general immune health and resistance to viral exposure.”

-Tori Hudson, ND
Decrease Cofactors as is Possible

Things that can increase the risk of cervical cancer:
- Smoking
- HIV infection
- Chlamydia infections
- Poor nutrition
- Multiple partners
- Obesity
- Oral contraceptive use
- Inadequate health care
Support a Healthy Body

Eat right.

- Limit intake of sugars, simple carbohydrates, highly processed foods, fatty and fried foods, and foods that are contaminated with chemicals, including artificial colors, flavors, sweeteners and preservatives.
- Focus on fruits and vegetables, whole grains, nuts, seeds, legumes, fish, lean organic meats. A rich fibrous diet filled with a wide variety of foods.

Consume enough water.

Reduce stress levels. Engage in stress relieving activities.

Get enough sleep, 7-8 hours each night.

Reduce the amount of toxins taken into the body.

Exercise! Incorporate movement and physical activity into your life.
Nutrients to Support a Healthy Cervix

Use a food based multi-vitamin, avoid synthetic based supplements especially if using large quantities of vitamins or supplements. It is important to support the whole body first, you need to lay a good nutritional foundation in order to create healthy cervix cells.

Studies have shown the following nutrients are linked to cervical health.

- **Vitamin A**
  - Low levels are associated with increased risk of cervical cancer.
  - Topical treatment of the cervix with Vitamin A has dramatic healing effects on the cervix. Vitamin A suppositories are available through your local ND.

- **Vitamin E**
- **Vitamin C**
- **Folic Acid**
- **B Complex**
Nutrients to Support a Healthy Cervix

- Carotenes – including beta-carotene, alpha-carotene, cryptoxanthin, gamma-carotene, zeaxanthin, lutein, and lycopene.
  - Deficiencies of beta-carotene have been linked with the development of cervical dysplasia.
    - Beta-carotene supplementation is contradicted in those at increased risk for lung cancer such as smokers.
    - Use natural beta-carotene only, not synthetic.
    - Don’t be alarmed if the skin turns slightly orange, it’s just the carotenoids, not toxicity.
  - Lycopene found in tomatoes can be helpful in clearing HPV infection.
Botanicals to Support a Healthy Cervix

Many herbs have potent antiviral and immuno-supportive effects and have been incorporated into successful treatment protocols. Tori Hudson has a formula that she uses, other practitioners may use other herbal formulas.

Green Tea – appears to be effective against HPV infected cells by inducing apoptosis (cellular death), modification of gene expression and anti-tumor effects.

- Topical applications seem especially effective. Green tea suppositories are available through your local ND.
**Botanicals to Support a Healthy Cervix**

- **Indole-3-Carbinol** – a phytochemical found in cruciferous vegetables. Converted in the stomach to a variety of compounds, including DIM. I-3-C appears to prevent abnormal cell growth and inhibit tumor growth. Especially in those that are stimulated by estrogen. I-3-C promotes healthy estrogen metabolism preventing the formation of the more harmful estrogen metabolites.

- Women with CIN II & III produce more of the harmful estrogen metabolite 16-alpha hydroxyestrone, which is a potent carcinogen. I-3-C can help to promote the conversion of 2-hydroxyestrogen metabolites, the “good” type of estrogen.

- Women with CIN I may not experience the same benefit from using I-3-C as someone with CIN II or III.
The Good News

- The good news is, that cervical dysplasia is very treatable.
- No matter how you choose to treat it, the likelihood of having successful results are very good.
- The important thing is to take action to remedy the situation.
- Remember, this is not cancer, and early detection enables you to be proactive. Cancer generally takes time to develop, the changes you implement now can reverse the progression and generate healthy cervix cells.
- If choosing to work with alternative methods of treatment, if dealing with anything more serious than mild dysplasia work with an experienced health care professional for help in correcting the situation.
- Many cases of mild dysplasia will clear up on their own. Especially, if you take steps to help your body clear the infection and produce healthy cervix cells.
Tori Hudson’s book: Women’s Encyclopedia of Natural Medicine is an excellent resource for women with cervical dysplasia. The dietary and lifestyle suggested can be implemented by anyone to assist in preventing reoccurrence of abnormal cervical cells.

Many Naturopathic physicians follow the protocol outlined by Hudson. If your practitioner is not familiar with the protocol take her book with you to the appointment.

To find a Naturopathic Doctor in your area, visit: http://www.naturopathic.org/
If You’d Like Suggestions....

Feel free to email me at sisterzeus@sisterzeus.com and I can give supplemental suggestions or tell you about what I did or might do if I was in your shoes.

Visit my website if you’d like to read about my personal experience dealing with cervical dysplasia with the help of a Naturopathic Doctor in 2000. http://www.sisterzeus.com/dysplasia.html
Resources & References

- Association of Reproductive Health Professionals. Health Matters Fact Sheets. Understanding Pap Test Results. (accessed 5/21/09) http://www.arhp.org/Publications-and-Resources/Patient-Resources/Fact-Sheets/Understanding-Pap-Test-Results
- Rutgers. HPV. (accessed 5/22/09) http://health.rutgers.edu/hpv/