How Cancer and Cancer Treatment Can Affect Fertility

What is fertility?

Fertility refers to having the ability to conceive, or being able to have a child. For females, fertility means they are able to become pregnant through normal sexual activity, and they are able to carry the baby through pregnancy. For males, fertility means they are able to father a child through normal sexual activity. A person's fertility depends on their reproductive organs working properly and other factors, such as when and how often they are having sex, certain hormones, and if their partner has any problems with fertility.

When a person cannot have a child, this is called **infertility**, or being infertile.

- For females, infertility can mean they are not able to get pregnant through normal sexual activity or they have problems carrying a baby through a full-term pregnancy.
- For males, infertility means they are not able to father a child through normal sexual activity.

Doctors usually consider someone to be infertile if they haven't been able to conceive a child after 12 or more months of regular sexual activity, or after 6 months if the woman is more than 35 years old.

Problems with fertility can also be called **reproductive problems**or**alterations**. They happen when certain hormone levels are abnormally low or high or if sex organs are removed or aren't working properly. Some people never find out why they are having fertility problems. Many experts believe stress and anxiety can cause changes that play a part in infertility.

Fertility and cancer

Cancer – and treatment for cancer – can sometimes make having a child more difficult, or can raise doubts about whether having children is the right thing to do. People with certain types of cancer or those who are getting treatment for cancer[1] may have these doubts or experience fertility problems. The problems might be caused by:

- A tumor directly damaging an organ or its surrounding tissue
- Removing cancerous organs that normally would be needed to have a child (for example, cancer surgery might be needed to remove all or part of the testicles, penis, ovaries, uterus, or cervix.)
- Certain treatments for cancer that can change hormone levels, put a woman into early menopause, damage nerves, or make certain sex organs stop working properly
- Psychological or emotional responses, such as stress and anxiety

Any of these situations can lead to serious concerns about fertility when treatment ends.

Fertility issues in children who have cancer

Children and teenagers who have cancer are often of special concern. This is because they might have surgery or get treatments that can damage their growing and maturing organs, and some can affect their hormone and sexual development. Having these things happen in their younger years can affect fertility later in life. You can read more about this in Late Effects of Childhood Cancer Treatment[2].

Birth defects from cancer treatment

Sometimes fertility is not affected by cancer treatment, but there can be concern about birth defects if a pregnancy happens during or after treatment. Studies show there is a risk of birth defects when a woman becomes pregnant while getting or after receiving some types of chemotherapy, radiation therapy, and hormone therapy. In some cases, the risk can last for a long time, making getting pregnant a concern even years after treatment ends. In general, women are usually advised to not to get pregnant during

treatment and may be told it's best not to get pregnant afterwards, depending on the treatment and situation.

The risk for birth defects when a man fathers a child during or after having treatment is not as clear. Many doctors advise men who are getting treatment to use birth control and not try to father a baby during treatment, just in case.

Talking about infertility when you have cancer

If fertility problems are possible, or there might be risks to having a baby after treatment, it's important to talk with the doctor and other members of the health care team about risks and available options.

Don't assume your doctor or nurse will ask you about these things or if fertility is important to you. You might need to start the conversation. Studies have found that doctors, nurses, and other members of a health care team don’t always ask about these problems during check-ups and treatment visits. Because of this, patients might not get enough information, support, or resources to help them deal with fertility problems.

Studies also show that many doctors and nurses don't know the right questions to ask about sexual orientation and gender identity. Many are not familiar with different terms that describe a person as lesbian, gay, bisexual, transgender (LGBT), or gender non-conforming (GNC). It's very important to let your cancer care team know your sexual orientation and gender identity, including what sex you were at birth and how you describe yourself now. Letting your cancer care team know this information will help you get the personalized care you need.

Experts recommend that doctors who are part of the cancer care team be involved in talking about fertility with patients, including medical oncologists, radiation oncologists, gynecologic oncologists, urologists, hematologists, pediatric oncologists, surgeons, nurses, and others. The cancer care team should talk about any possible fertility problems that might happen due to treatment as early as possible, either before surgery or before treatment starts. These conversations should consider your preferences, religious or personal beliefs, and the cost of available options. You might want to get a second opinion[3], or get a referral to a fertility or reproductive specialist.

For adult patients

Depending on your age, personal choices, family situation, and stage of life, being able to have a child (or another child) may be important to you. If so, be sure to talk to your

with the patient to treatment and follow-up visits and check-ups might be a good idea, too. You might want to think about asking for a referral to a counselor, therapist, or fertility specialist.

Before surgery or treatment

Parents of children with cancer, and adult patients and their partners need to know about possible fertility problems before having surgery and other treatments. Having these talks in advance can help know what to expect. But, studies show that not many cancer patients remember being told about fertility risks before surgery or treatment. Asking questions and getting honest answers can open up the opportunity for follow-up talks that lead to making informed decisions about care through the entire cancer journey and later in life.

During cancer treatment

You may have concerns about fertility during treatment, or may notice changes in your body that you think might affect your ability to have children after treatment. It's important to keep talking to your health care team as you move into the treatment phase. Or, if you didn't talk about fertility before surgery or treatment, you can start talking about it during treatment-related visits, even if your doctor or nurse don't bring it up. Include your partner, if you're comfortable doing so. Remember, if your health care team doesn't know about a problem you're having, they can't help you manage it.

After cancer treatment

People who have finished cancer treatment may have lingering problems that affect fertility, and some might be lifelong. These can affect relationships, too. Be sure to continue reporting problems and asking questions during follow-up visits. If you are no longer managed by a cancer care team, be sure those providing health care for you are aware of problems you've had, what has helped or not helped, and other problems that might come up. Seeing a fertility specialist might be beneficial.

Palliative care

Palliative care[5] can help address quality-of-life concerns. Ask members of a palliative care team to help manage fertility problems. This team of professionals can help manage symptoms at any time from the point of diagnosis, throughout treatment, and beyond for people living with a serious illness, such as cancer, no matter what stage it is.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/treatment-types.html
2. www.cancer.org/cancer/survivorship/children-with-cancer/late-effects-of-cancer-treatment.html
   www.cancer.org/cancer/managing-cancer/finding-care/seeking-a-second-

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U.S. Department of Health and Human Services, National Institutes of Health (NIH). *Fertility and infertility.* Accessed at https://www.nichd.nih.gov/health/topics/infertility on January 31, 2020.

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