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The Tips for Living and Coping (TLC) Bulletin, offering resources and suggestions to help with the challenges of living with a brain tumor diagnosis, is sent monthly to our subscribers. Let us know what topics you would like to read about in future TLC columns. We want to hear from you!

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Fertility Preservation Options

Brain tumor survival rates have increased steadily in recent years. However, the more aggressive forms of treatment that are making this possible may also compromise a younger patient’s ability to someday have biological children. Today, there are a range of reproductive technologies available to brain tumor patients.

Whenever possible, decisions regarding fertility preservation should be made prior to the start of any treatment. Be sure to talk to your doctor about your treatment and how it will (or has) affect(ed) your fertility. Generally, your oncologist can give you an idea of what your fertility risk is with your particular treatment. Then, ask to speak with either a urologist or reproductive endocrinologist who can help you explore your options.

This month's TLC explains what fertility preservation options are available, what questions to ask, and how to get more information or medical assistance based on your particular situation.

What do I need to know?

After you’ve been diagnosed with a brain tumor, having children may be the farthest thing from your mind. You may have heard that chemotherapy or radiation will affect your fertility, and you may think you have few, if any, options. Although it is true that many cancer treatments affect fertility, each diagnosis and its accompanying treatment vary in the risk they pose to your reproductive organs. Each chemotherapy regimen affects the ovaries or testes in a different way. Just as all chemotherapy does not mean you will lose your hair, all cancer patients will not necessarily become infertile because of their treatment.

For women, chemotherapy can cause damage to your ovarian reserve. A women is born with all of the eggs she will ever have and cannot create new ones throughout her life. The number of eggs a woman has peaks before she is born and then diminishes as she ages. Chemotherapy can age your eggs, affecting the number and the quality of eggs, making it difficult to achieve a pregnancy. So even though you may only be 30, chemotherapy may caused your ovaries to resemble those of a woman who is 51 (the average age of menopause).

For men, chemotherapy may cause temporary or permanent damage to the testes. We know that alkylating agents pose the greatest risk of infertility for men and women.
Radiation to the pelvic area and the head/neck area can also affect fertility. Radiation that damages parts of the brain that control hormone production can sometimes prevent the hormonal systems from functioning properly. This may be resolved with hormone replacement therapy.

I'm female, what are my options?

There are a few options for women, but many of them take time.

- Egg harvesting (in vitro fertilization) is a process where a woman takes daily injections of stimulating hormones to mature many oocytes (eggs) for approximately 10 to 12 days. During this time, she is monitored with frequent blood work and ultrasounds to see how the eggs are progressing. When the eggs are matured, the woman will have an egg retrieval which is an outpatient procedure done in the reproductive endocrinologist's office under conscious sedation. After the eggs are harvested, they can either be fertilized to create embryos and frozen, or left unfertilized and frozen. Both of these options are considered mature technologies. Generally, a patient will need approximately three weeks to complete an egg harvest.
- Ovarian Tissue Freezing is a surgical procedure where one ovary (or part of an ovary) is removed and the ovarian tissue is stored for future use. There are two options for use of this tissue, and both are experimental. First, the tissue may be transplanted back into the patient for future use. This technology has resulted in about 10 live births. Second, the Oncofertility Consortium is trying to learn how to take the immature eggs out of the ovarian tissue and mature them in the laboratory to the point where they could be fertilized. Patients generally need between a few days and a week to arrange the surgery for ovarian tissue freezing.

I'm male, what are my options?

- Sperm banking is the most common option for men to preserve their fertility. After giving a semen sample at a sperm bank or urologist’s office, a semen analysis is completed and the sperm are frozen. Because of a technique called ICSI (Intracytoplasmic Sperm Injection), one semen sample may be enough for male patients to preserve their ability to have biological children. ICSI is a process in which one single sperm is injected into an egg to create an embryo using in vitro fertilization (IVF) technology. Sperm banking is generally easy to arrange within a matter of hours or days.
- Testicular Tissue Extraction is an option for men who do not have mature sperm present in their semen. Testicular sperm extraction is an outpatient surgical procedure. Testicular tissue is obtained, usually by open biopsy and then examined for sperm cells. If sperm cells are found, they are removed and used immediately or frozen for future use.

How do I know if I'm fertile?

If your treatment has already started or even finished, you may want to know how your treatment has affected your fertility. You will need to be evaluated by your oncologist and primary care physician. You may also want to see a reproductive endocrinologist or urologist.

If you are female and still menstruating, you will need to have a follicle stimulating hormone (FSH) test which is typically taken on day three of your cycle. The FSH test will give a number that will indicate the strength of your ovarian reserve. If you are male, you will need to request a semen analysis. To get an accurate result on either of these tests, you should wait until approximately six months after your cancer treatment is completed.
What other options are out there?

If you know that you are no longer fertile because of your treatment but would still like to have children, there are still options available for you. Donor egg, embryo or sperm are options if you wish to have a child, although the child may not be biologically related to you. Adoption is another option to anyone who would like to become a parent and is not concerned about a biological connection to the child. It all depends upon how you see your family makeup.

You may also decide not to preserve your fertility. This is an overwhelming time in your life and many patients choose to focus on their treatment. There is nothing wrong with this decision. However, it is important to make an informed choice.

Next steps?

In order to make an informed decision, be sure you have all of the facts about how to preserve your fertility or what options you might have after treatment has started or finished. Remember that you can still try to preserve your fertility even though treatment has already started. Also, if you have completed treatment and want to know what your fertility status is, you can do that right away. Your treatment may have shortened your time span to be fertile.

You can always talk with a nurse, social worker or psychologist, or find a local support group, to help you make your decision. Look for help when you need it.

All of us grow up dreaming of what our life will be like. We imagine owning a home, having a career, traveling, having a family, or wherever our imagination takes us. We never think these dreams will be taken away from us, and they certainly do not include a brain tumor diagnosis. If you dream of being a parent, we hope you can find a way to achieve it.

For more information...please visit
http://www.myoncofertility.org/
http://www.fertilehope.org/
www.cancer.northwestern.edu/fertilitypreservation
http://www.oncofertility.northwestern.edu/

Our special thanks to Jill Trainer, MSW, LCSW Patient Navigator for Fertility Preservation Robert H Lurie Comprehensive Cancer Center of Northwestern University, Chicago, IL for authoring this month’s TLC.

To learn more about the resources we offer please contact one of our Social Workers at 800-886-2282 or e-mail us at socialwork@abta.org. Please also take a moment to visit our ABTA Care and Support Web page. While visiting, be sure to read our latest edition of “The Caring Column,” a monthly column designed to answer your questions. Click here to read more.

On another note, we are looking for volunteers for the 2009 Path to Progress being held on Saturday, April 25th, at Soldier Field in Chicago. If you’re able to help at the event this year please visit our Web site at http://www.abta.org/ and click on Path to Progress 5K Run/Walk to sign up as a volunteer or email Michelle at MCalkins@abta.org. You can also contact Michelle by phone at 847-827-9915. Please be aware that if you are participating in the event, you will not be eligible to volunteer.

The American Brain Tumor Association funds brain tumor research and offers services to
patients and family members in the U.S. and throughout the world. Help us spread hope by supporting ABTA in its mission.