The Royal Children's Hospital Fertility Preservation Service
Fertility Preservation Information Sheet for Adolescent and Young Men Undergoing Cancer Treatment

What Is Fertility Preservation?
Fertility preservation is a process that has the potential to preserve a person's ability to have a biological child in the future. This includes the freezing of healthy testicular tissue and mature sperm.

Why Do I Need to Think About Fertility Preservation?
Having children may not have been something that you have thought about. However, fertility preservation is something that we need to discuss before you start your cancer treatment due to the effects chemotherapy and/or radiotherapy have on fertility. You may be thinking that you don't want to have children but you may change your mind when you are older so it is important to keep your options open for the future.

Potential Impact of Cancer Treatment on Fertility
Cancer treatments such as chemotherapy and radiotherapy, may damage the cells responsible for making sperm. Depending on the severity, this can permanently affect fertility. Your Oncologist will outline the estimated impact of treatment on your fertility (low, medium or high risk). Unfortunately, it can be difficult to be precise about risk this due to limited data.

How Does Chemotherapy Affect Fertility?
Chemotherapy drugs enter the blood stream and travel around the body searching for cancer cells to destroy. Unfortunately, this medication may destroy sperm and the cells responsible for making sperm. After treatment, it can take many months for the affected sperm to be repaired and new healthy sperm to be produced.

How Does Radiotherapy Affect Fertility?
Radiotherapy destroys cancer cells. It can affect fertility directly through irradiation of the testis, or indirectly. Total body radiation has a high risk of causing infertility. If radiotherapy is required to treat a brain tumour, the hormone messages from the brain to the testes can be disrupted.

What Options Are Available to Me?

1. Sperm freezing: this is when you produce a sample of sperm via masturbation which is then frozen until you are ready to think about starting a family. It's not uncommon to need a few goes at collection of sperm and that's okay. Sometimes we don't achieve a sample or you may wish to try further and in that situation testicular tissue cryopreservation might be possible.
2. Testicular Tissue Cryopreservation (TTCP): this is the collection of a small piece of the testicle prior to starting treatment. In a mature teenager the tissue contains sperm as well as the cells that make sperm. In a young child who hasn't gone through puberty, the tissue will not contain any sperm and so is considered experimental. To collect the tissue a small incision is made in the scrotum, where part of the testicle is removed (approximately 20-30%). It is then preserved and frozen until you are ready to think about starting a family.
3. Sperm donation from a male relative or other donor in the future.
4. Fostering or adoption.

What About During and After Cancer Treatment?
Doctors at RCH are available to you for discussion about a range of topics. These include: relationships, fertility monitoring, return of hormone function after cancer treatment and any other concerns you may have. After treatment, please ask your treating Oncologist to refer you to an Endocrinologist.

Who Do I Contact For Further Information?
For further information, please contact the Oncofertility team at RCH.

Oncofertility Team
The Royal Children's Hospital
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