

# Becoming a dad after cancer



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## Sperm retrieval is possible in young boys, so it is important to initiate a discussion

FERTILITY is a particularly pertinent consideration for adolescents and young adults diagnosed with cancer at an age when they might not have considered future fatherhood.

Learning that cancer, or its treatment, might put fertility at risk can be confronting. However, as steps can be taken to preserve fertility, it's an important conversation for these young people to have with their doctors and families.

Each year, about 1000 cases of cancer are diagnosed in Australians aged between 15 and 24, with melanoma, Hodgkin's disease, testicular cancer and leukaemia being the most common.

Cancer of any type may affect fertility directly (e.g. through interfering with the gonadotrophic drive to the testes or by directly damaging the testes) or by treatment (chemotherapy, radiotherapy or surgery) that damages the seminiferous epithelium and its component germ cells disrupting the genetic integrity of sperm. But not all cancer treatments affect fertility.

### FERTILITY PRESERVATION

It is important for adolescent and young adult males to know about the options for fertility preservation as soon as possible after cancer diagnosis.

Strategies focus on acquiring sperm for cryopreservation before therapy. Sperm analysis has shown that the integrity of sperm DNA may be affected after just one treatment session.<sup>1</sup>

The process of collecting sperm for cryopreservation can involve masturbation,

electro-ejaculation or testicular biopsy.

There are multiple considerations for choosing a particular method, including age, cultural/religious beliefs, sexual orientation and stage of illness. If an anaesthetic is needed for collection, this can usually be done at the same time as another procedure.<sup>2</sup>

Advances in spermatogonial stem cell research might lead to future fertility preservation options, but they are not yet ready for clinical application.

Sperm production commences in mid-puberty, usually when the testes reach about half adult size (6-8 mL). Most 13-year-old boys who are able to produce a semen sample have good quality sperm that can be stored.<sup>3</sup> Sperm retrieval has been reported in boys as young as 11.<sup>4</sup>

Often doctors do not initiate discussion about fertility with younger patients and the opportunity for fertility preservation is missed.<sup>5</sup> Although sperm can be retrieved through specialised micro-surgical techniques later in life, sometimes this is not possible, leaving adoption or gamete donation as the man's only options for fatherhood.

### WHAT GPs CAN DO

Clinical Oncology Society of Australia guidelines<sup>6</sup> recommend fertility issues be discussed early and fully, including consideration of ethical issues, individual patient concerns, and prompt referral to a fertility specialist.

Information needs to be clear and complete. It should facilitate an effective and age-specific discussion. Written information and psychosocial support should be provided.

When considering fatherhood, a man who has stored sperm should be referred to a fertility specialist to discuss options for assisted reproduction, including artificial insemination, conventional IVF or ICSI.

Pregnancy has been achieved using sperm stored up to 28 years.

A GP who is known and trusted by a young man and his family is ideally placed to start a discussion after a cancer diagnosis. ■

References at [medobs.com.au](http://medobs.com.au)

Andrology Australia ([www.andrologyaustralia.org](http://www.andrologyaustralia.org)) is the centre for male reproductive health, funded by the Australian Government Department of Health and administered by Monash University.

### Resources

- Cancer Council Helpline: 13 11 20
- CanTeen booklet [www.canteen.org.au/resource/a-guide-to-fertility-for-young-people-with-cancer/](http://www.canteen.org.au/resource/a-guide-to-fertility-for-young-people-with-cancer/)
- [www.andrologyaustralia.org/fertility-preservation-for-aya-males/](http://www.andrologyaustralia.org/fertility-preservation-for-aya-males/)

