

# Prostate cancer risk halved for subfertile men

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Involuntary childlessness owing to reduced fertility is a concern for many men. However, these men do have one advantage – they run a significantly lower risk of suffering from prostate cancer. Researchers are interested in whether this phenomenon could be used in the fight against cancer.

There is a clear link between male subfertility and a lower risk of prostate cancer. According to a new thesis from Lund University in Sweden, involuntarily childless [men](#) have around a 50 per cent lower risk of suffering from prostate cancer than men who have fathered at least one child.

Yasir Ruhayel, a doctoral student at Lund University and doctor at Skåne University Hospital, has based his research on the Malmö Diet and Cancer population study, where he has compared around 450 men with prostate cancer with an equal number of men in a control group who had not been diagnosed with the disease.

The thesis reinforces the findings of previous register-based studies, which have shown a connection, but this is the first time the issue has been studied in greater detail. An important conclusion is that the connection between reduced prostate cancer risk and subfertility is stronger than the connection between prostate cancer and other factors previously studied, for example diet, smoking, alcohol consumption and a number of different diseases.

## Are there genetic explanations?

Yasir Ruhayel has also investigated whether variation in certain genes may be linked to the reduction in prostate [cancer risk](#) observed in the subfertile men.

"We have found certain genetic associations, but the results are preliminary and more extensive studies involving a larger number of men are needed before the significance of the genetics can be verified", says Yasir Ruhayel.

One of the identified candidate genes is the AHR gene, which interacts with the male and female sex hormone signalling systems. AHR is also known as the 'dioxin receptor' because it mediates the harmful effects of the environmental toxicant dioxin, which can affect fertility.

If future research is able to more accurately determine which genes reduce the risk of prostate cancer, then this may open up new opportunities to develop drugs. However, before this can happen the genes with the desirable properties must be considered in a broader context, because reduced fertility is usually caused by a number of factors. The cancer-blocking properties must also be separated out and isolated from the properties that reduce fertility.

The researchers at Lund University are also interested in the reverse situation – whether it is possible to find ways of helping men with reduced fertility by studying the genes of men with [prostate cancer](#).

**More information:** Link to thesis:

[www.lu.se/o.o.i.s?id=12588&postid=2269342](http://www.lu.se/o.o.i.s?id=12588&postid=2269342)

Provided by Lund University

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