

# Cardiovascular and suicide risk raised after prostate cancer diagnosis

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Men newly diagnosed with prostate cancer have an increased risk of cardiovascular events and suicide, reports a new study in this week's *PLoS Medicine*. Katja Falland Fang Fang from the Karolinska Institutet in Stockholm, Sweden and their colleagues found that the relative risks of cardiovascular events and suicide were elevated during the first year after prostate cancer diagnosis, particularly during the first week.

The researchers used the Swedish Cancer Register to identify men 30 years or older diagnosed with [prostate cancer](#) between 1961 and 2004, and then searched for information on men's subsequent fatal and non-fatal cardiovascular events and suicides from the Causes of Death Register and the Inpatient Register in Sweden. Of the 168,584 men diagnosed with prostate cancer during the study period, 10,126 (6%) experienced a [cardiovascular event](#) during the year following diagnosis and 136 (0.08%) committed [suicide](#).

The researchers found that before 1987, men with prostate cancer were about eleven times as likely to have a fatal cardiovascular event during the first week after their diagnosis as men without prostate cancer. During the first year after their diagnosis, men with prostate cancer were nearly twice as likely to have a cardiovascular event as men without prostate cancer (a relative risk of 1.9). From 1987, the relative risk of combined fatal and non-fatal cardiovascular events associated with a diagnosis of prostate cancer was 2.8 during the first week and 1.3 during the first year after diagnosis; that is, diagnosed men were about three times as likely to have a cardiovascular event during the first week as

undiagnosed men, and at a slightly raised risk in the first year.

Because a very few men newly diagnosed with prostate cancer committed suicide (just 136 of nearly 170,000 men included in the study), the absolute risk of suicide is very small. However, the relative risk of suicide associated with a diagnosis of prostate cancer was 8.4 during the first week and 2.6 during the first year after diagnosis throughout the study period.

The authors say that the emotional stress associated with the diagnosis of prostate cancer may lead to higher risks of cardiovascular morbidity and suicide. "The risks are highest during the first week after diagnosis and young men seem to be most vulnerable, say the authors. "These unrecognized consequences of a prostate cancer diagnosis deserve the attention of health professionals to the increasing number of men that are diagnosed with this disease."

The study has important limitations: no information on tumor size or aggressiveness is contained in the Cancer Register, so the researchers could not look at the relationship between disease severity and the likelihood of a cardiovascular event or suicide. Furthermore, because of the study design, men who received a diagnosis of prostate cancer may have had additional characteristics in common that contributed to their increased risk of cardiovascular events and suicide.

**More information:** Fall K, Fang F, Mucci L, Ye W, Andre'n O, et al. (2009) Immediate Risk for Cardiovascular Events and Suicide Following a Prostate Cancer Diagnosis: Prospective Cohort Study. PLoS Med 6(12): e1000197. [doi:10.1371/journal.pmed.1000197](https://doi.org/10.1371/journal.pmed.1000197)

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