

## 1. Submission

### Life Time Mortality Of Men With Normal And With Subnormal Sperm Counts As Young Adults.

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Almost nothing is known about the lifetime morbidity and mortality consequences of male fertility disorders. There are good reasons for studying that issue, though:

- Spermatogenesis is one of the few non pathological examples of continuous cell proliferation in the adult organism. Disorders of spermatogenesis in some aspects may be considered as useful models of continuous cell proliferation disorders in general.
- Maybe not childlessness per se, but only if caused by compromised fertility may come with a shorter lifespan in the male, even without any co-morbidity.
- There are speculations about decreasing sperm quality in industrialized countries. Lifetime morbidity and mortality of men with normal and subnormal sperm counts diagnosed before and during the alleged sperm quality decline may cast additional light on the potential disease burden of that decline.

Here we – apparently in one of the first such studies ever - report on the lifetime mortality of all men with normal and low sperm counts measured in the outpatient facility of the Department of Andrology at Marburg University Hospital from 1949 onwards. Some few cases with potentially life shortening co-morbidity were excluded. Most men had presented themselves for want of children. From public registration sources we have the birth dates of 854 men (the youngest born in 1937), and the death dates of 192 of them, or we know that they were alive at the end of 2002. Of the 608 normozoospermic men, 119 have died, of the 121 oligozoospermic men, 35 have died, of the 125 azoospermic men, 37 have died. In a lifetable analysis by exact duration of life with birth date and date of sperm count controlled, we observed a cumulative mortality of the three groups of 19,6%, 28,9% and 29,6% resp. The difference between the mortality in the normozoospermia group and that of the two other groups was statistically significant (Gehan statistics 8,994,  $p=.011$ .) We conclude that men with subnormal sperm counts had a lower life expectancy, even if they had no apparent other health problem.

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