SCSA: Measuring sperm DNA damage using the SCSA test





The SCSA test tends to be more accurate than other sperm tests as it measures thousands of sperm at once.

Traditionally the diagnosis of male infertility has been based on the number ('sperm concentration'), movement ('motility') and shape ('morphology') of sperm as seen down a microscope.

There is increasing evidence to suggest that sperm DNA damage may also contribute to male infertility. Most sperm DNA damage is caused by 'Reactive Oxygen Species' (ROS). It may be associated with increased age; defective DNA packaging inside the sperm head; increased scrotal temperature; having a varicocele; genital tract infection; smoking; a diet with low levels of antioxidants; or exposure to environmental contaminants and toxins.

The body's main defence against ROS damage is to maintain an optimal antioxidant environment for sperm maturation and storage before ejaculation. This is one of the reasons why Fertility Associates promotes a healthy lifestyle, healthy eating and considering the use of antioxidant supplements.

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Sperm DNA damage can be measured by a variety of tests. We now offer the SCSA (Sperm Chromatin Structure Assay) test, which uses computer flow cytometry to measure DNA damage in individual sperm. Because it measures thousands of sperm at once, it tends to be more accurate than other tests.

Your doctor will discuss whether a SCSA test for sperm DNA damage may be useful for you, taking into consideration your medical and fertility history, lifestyle and the outcome of other investigations and treatments.

The SCSA test involves providing a semen sample at a Fertility Associates clinic. When you book your test, you will be given our semen analysis form which has information on the preferred period of abstinence and other instructions. The tests are done once a week in Wellington, so the results will be available within two weeks of providing the sample at your closest Fertility Associates clinic.

Like most fertility tests, a sperm DNA fragmentation test does not give a definitive answer. The higher the rate of DNA damage, the more likely it may impact on embryo development or miscarriage risk. We divide the results into three zones in the graph below to indicate the likely impact of your SCSA test result.

