



Sperm Chromatin Structure Assay (SCSA)

What is the SCSA test?

Sperm chromatin structure assay, or SCSA, is the most accurate means available to assess the level of sperm DNA damage or fragmentation in an ejaculate. High levels of sperm DNA fragmentation are associated with an increased risk of miscarriages and pregnancy failures. There are no symptoms related to high levels of sperm DNA fragmentation and it is not detected through routine semen analysis. Even with normal sperm count, motility and morphology, sperm may have broken DNA that will hinder normal embryo development.

The percentage of DNA fragmentation indicates fertility potential, the results of which can help your doctor determine the best course of treatment.

% Fragmentation	Indicated Fertility Potential
Less than or equal to 15%	Excellent to good
15-25%	Good to fair
Greater than 25%	Fair to poor

Who is recommended for SCSA screening?

SCSA is recommended for couples with unexplained infertility, previous IVF failures or poor embryo development or a history of miscarriage. Other indicators include men over the age of 40 years, smoking, excessive alcohol consumption, exposure to toxic agents, infection, heat, stress, some prescription medicines and obesity.

How is sperm DNA fragmentation treated?

Whilst sperm DNA fragmentation cannot be directly treated, it can be prevented or reduced by lifestyle changes or by taking a course of antioxidants specifically formulated to support male fertility. Reduction or removal of possible contributing factors, such as smoking, heat, poor diet, etc. can reduce elevated fragmentation levels. Additionally, supplementation with male formulated antioxidants, such as Menevit, Vitamenz and ProConceptia, have been shown to support healthy sperm production and help reduce elevated sperm DNA fragmentation by removing harmful free radicals.

The sperm population takes about 3 months to fully regenerate. Therefore, for the best results a 3 month course of antioxidants, along with lifestyle changes where indicated, is recommended. After which, a repeat SCSA test will ensure DNA integrity has returned to optimal levels.

How much does it cost?

SCSA is not included in a routine semen analysis and is not covered by public funding. If your doctor has also requested a routine semen analysis, this is an additional cost and will be charged separately.

Please refer to Repromed's current price list for more information.

References

1. Evenson, D. The sperm chromatin structure assay (SCSA) and other sperm DNA fragmentation tests for evaluation of sperm nuclear DNA integrity as related to fertility. *Animal Reproduction Science* 169, 2016.
2. Evenson, D. Sperm chromatin structure assay (SCSA): 30 years of experience with SCSA. *Methods in Molecular Biology*, 2013

Ask your Repromed doctor if SCSA is recommended for you.