SpermComet® DNA Test
your results
and what they mean

SpermComet
The Next Generation Test For Men’s Health
You and your partner are each going to give some of your DNA to your baby, so the health of your DNA is important as it can influence your baby’s health.

What is sperm DNA damage?

Research has shown that one of the reasons for increasing infertility around Europe is that sperm quality has deteriorated. There are many reasons for this, such as smoking, poor diet and environmental pollutants. All of these produce high levels of Reactive Oxygen Species or ‘free radicals’. These increase oxidative stress that damages your sperm DNA.

Sperm DNA damage can lead to:

- Fewer eggs being fertilized
- Embryos not developing as well as they should
- Lower pregnancy rates
- Miscarriage

Do we need a sperm DNA damage test if our semen analysis is normal?

Yes. A semen analysis only looks at the outside of sperm. The SpermComet looks inside. There is little connection between the two.

Recent research shows that most men with normal semen analysis who are attending for fertility investigations still have sperm DNA damage. So even if your sperm counts are normal, you may have DNA damage in your sperm. This means that just because you have a normal semen analysis, you may not be able to get your partner pregnant.

Sperm DNA testing can guide you to a diagnosis and give you more information for your treatment choices.
Your Treatment choices explained

In vitro fertilization (IVF)

IVF is an infertility treatment that allows the egg to be fertilized with the sperm in a culture dish.

1. The woman is given hormone treatment to stimulate egg production.
2. Several eggs are taken from the woman’s ovaries.
3. In the lab, each egg is put in a culture dish with up to 500,000 of the man’s sperm and left overnight to fertilize.
4. The fertilized eggs become embryos. They are placed in an incubator for 48 hours and monitored closely.
5. The best embryo is transferred into the woman’s womb or frozen for use in the future.

Intracytoplasmic sperm injection (ICSI)

ICSI is a similar infertility treatment to IVF except that just one sperm is chosen by the embryologist and it is injected right inside the egg.

1. The woman is given hormone treatment to stimulate egg production.
2. Multiple eggs are taken from the woman’s ovaries.
3. In the lab, the best sperm is chosen (one with good motility and morphology) and is injected directly into each egg.
4. Each embryo is then placed in an incubator for 48 hours and monitored closely.
5. Once the embryos have developed (to Day 3 embryos or Day 5 blastocysts), a maximum of two are transferred into the woman’s womb.

ICSI with sperm taken from the testis

If a man has little or no sperm in his ejaculate (oligozoospermia or azoospermia), a tiny biopsy of sperm can be taken from the testis in an outpatient surgical procedure, under local anaesthesia.

This can also be useful for couples that have previously had failed ICSI treatment, if the man has high sperm DNA damage in his ejaculate.
What fertility treatment would be best for you?

If there is less than 25% damage:
You do not have a significant problem with sperm DNA damage.

If there is between 26-50% damage:
You have a higher risk of male infertility and so are less likely to get your partner pregnant naturally. You might want to consider a fertility treatment such as in vitro fertilization (IVF). With this level of damage, changes in lifestyle and diet can often be successful in lowering damage to increase chances of success in the future (see next page).

If there is over 50% damage:
You have a high risk of failure with IVF treatment. ICSI is more likely to be successful than IVF. One reason for this is that in ICSI treatment, the egg gets a better chance to repair the sperm’s DNA damage.

If there is over 50% damage and you have had failed ICSI treatment already:
You may wish to talk to your fertility specialist about ICSI with surgically retrieved sperm. This is an invasive procedure (as described previously) but it may give you a better success rate. Studies have shown that the journey the sperm makes from the testis through to ejaculation can actually induce some of the damage seen in the DNA. So, taking sperm from the testis protects them and may give higher success.

If ICSI has failed with your ejaculated sperm and you do not wish to have sperm retrieved surgically, you might want to consider using donor sperm.
You produce new sperm every three months so you can improve the DNA in your next batch of sperm.

Common sperm enemies:

Do you smoke?
Smoking produces ‘free radicals’ and these can harm your sperm DNA. The heritable effects of smoking on children and as tobacco contains over 4,000 toxins, stopping smoking is a must to improve fertility. Also, studies have shown that fathers smoking when their children are conceived causing sperm damage that can harm their children’s health.

Do you take Cannabis?
Regular use of cannabis can reduce your sperm count irreversibly.

Do you drink too much alcohol
Drinking more than 1 pint of beer or 1 large glass of wine a day increases your risk of infertility. Alcohol can reduce sperm count and motility as well as inducing oxidative stress causing more sperm DNA. When trying to start a family try to keep alcohol intake to a minimum for at least 3 months prior to conception.

Is your diet affecting your health?
How many take-away meals do you have a week?
How few home cooked meals do you eat a week?
Poor nutrition leads to poor sperm.
Excess weight can also lead to poor sperm quality and male infertility.

SpermComet® reveals your Sperm DNA Health.

www.spermcomet.com
Do you feel depressed? Always tired? Difficulty in sleeping? Angry? Stress can trigger a range of illnesses and can affect fertility in both men and women.

Unless you need them, supplements can do more harm than good. Unnecessary anti-oxidants can actually cause oxidative stress instead of reducing it, causing even more problems.

Also note that they can affect your general health;
- Long-term intake of 20mg Vitamin B6 can cause mild tingling and numbness.
- Long-term intake of 5mg of Manganese can cause muscle pain and fatigue.
- Long-term intake of 30mg Zinc can cause anaemia.
- Long-term intake of Selenium and Vitamin E can cause prostate cancer.

Always test first before you start taking any supplements.

Are you stressed

Do you feel depressed? Always tired? Difficulty in sleeping? Angry? Stress can trigger a range of illnesses and can affect fertility in both men and women.

But here's the good news...

A good friend of sperm:

Have more sex

The healthiest sperm are those produced between 2-7 days after the last ejaculation.

If you take some or all of these simple lifestyle changes you could improve your sperm naturally.

More sperm enemies:

Do you take dietary supplements

Unless you need them, supplements can do more harm than good. Unnecessary anti-oxidants can actually cause oxidative stress instead of reducing it, causing even more problems.

Also note that they can affect your general health;
- Long-term intake of 20mg Vitamin B6 can cause mild tingling and numbness.
- Long-term intake of 5mg of Manganese can cause muscle pain and fatigue.
- Long-term intake of 30mg Zinc can cause anaemia.
- Long-term intake of Selenium and Vitamin E can cause prostate cancer.

Always test first before you start taking any supplements.
For more advice, talk to your Fertility Clinic

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