Aging Men and Sperm Health: Can Older Men be Fathers?

by Kathryn Moloney ND. - Tuesday, February 06, 2018


Male fertility issues are becoming more and more common, for men of all ages. People may be surprised to learn that in couples who have fertility issues, 40% of cases the problem rests with the male, 40% with the female, 10% with both and 10% unknown [1]. There is a common misconception that fertility issues are usually due to an issue with the female, but this is not the case.

What we know is that sperm health, in general, is declining. Sperm counts have dropped more than 50% in less than 40 years [2] and environmental factors, such as pesticides, exogenous estrogens, and heavy metals may negatively impact sperm development [3].

An idea that I often come across is that people are either ‘fertile’ or ‘infertile’ - like an on/off switch. However, fertility, age, and sperm production are a sliding scale. Fertility is affected by many things including age, diet, lifestyle, stress, exercise (just to name a few), so people can be fertile or less fertile one month to another, one year to the next. For example, couples who require IVF to conceive their first child and can go on to conceive their second, naturally. Or the opposite, a couple may conceive naturally for their first child and then go on to have fertility issues afterward.

There is also a common misconception that men can create children at any age. It is often thought that if a man has fathered a child, that he is ‘fertile’ and will be able to do so again no matter his age. But research shows that aging affects sperm quality, making it harder to achieve a pregnancy and increasing the risk of miscarriage.

This doesn’t mean that older men aren’t able to be fathers, it just means that aging can bring challenges and that for many older man, the effort that is needed to improve sperm health and fertility, will be much greater than for younger men. For older men, it may take longer to conceive. Also, the time that will be needed in the preconception period to clean out the body and increase sperm health will be much longer than for a 30 year old.

However, younger men can have fertility challenges and regardless, there is a lot that can do a lot to improve sperm and male fertility, with the correct advice.

Let’s look at some age and fertility statistics:

- Women aged under 30 with a male partner aged 30 to 35 - had a 73% chance of a live birth after IVF
- In women aged under 30 with a male partner aged 40-42 - the success rate fell to 46%
- When women aged 35-40 partnered with men aged 30-35, their chances of having a baby stood at 54%, a figure that rose to 70% when the man was under 30
- On average, women aged 30 to 35 who had older male partners had live birth rates of 64% compared with 70% if the man was in the same age bracket [4].
I imagine that most people would find these statistics surprising, given that it’s pretty common for men these days to only start thinking about having a family in their late 30s to early 40s, probably not realising that they too have a ticking biological clock.

It’s not only that achieving pregnancy can be harder. Increased age of the father may also have negative health implications for the child. For example, research conducted at the University of Copenhagen found that children born to older fathers had a greater risk of developing autism [5].

Allan Pacey, an expert in male fertility at Sheffield University says that "there is growing evidence from a number of studies to show that men are not totally immune from reproductive aging," and "previous studies of couples trying to conceive naturally or undergoing IVF have shown that men over the age of about 40 are less fertile than younger men." [6]

Age & Sperm Production: Why does sperm health decline with age?

It is commonly understood (and backed up by science) that a major reason for declining fertility is due to a rise in chromosomal abnormalities in woman’s eggs (referred to as poor egg quality). What is less often talked about is that chromosomal abnormalities in the sperm, caused by mutations in the sperm, are also a problem. You may have heard of a DNA fragmentation test that is available as part of a semen analysis? This is the test that assesses the quality of the DNA in the sperm. This is an essential parameter that needs to be tested alongside the count, motility, viscosity, and morphology of the sperm. It’s a more expensive addition to a sperm analysis, but how can we really know the health of the sperm if we don’t know how intact the DNA is?

Another reason for the age-related sperm health decline is that the longer that someone has lived on the planet, the more that they have been exposed to chemicals, toxic substances, radiation, plus poor quality food and water. So for a man who is trying to conceive in his 50-60s, he might have had double the exposure than someone in their 30s, depending on the lifestyle that he has led. Even for a 40 year old, as we saw above, their partners had a 26% reduced chance of conceiving, showing that by then, they may already have had an increased exposure to these substances that cause issues in their bodies and are reflected in their sperm health.

We also know that as people age, they have a reduced absorption of nutrients from their food. This can be due to reduced metabolic function, which requires them to have a reduced caloric intake, reduced gut health or interactions with medications. The healthy intake of key nutrients is essential for sperm health, so this reduced absorption of vitamins and minerals can be detrimental to sperm health.

Why is age and fertility knowledge helpful?

We know from a number of studies that one of the reasons why women are having babies later is because men are sometimes slow to support the idea. My hope is that if this information about age-related declining sperm health becomes common knowledge, men will begin to prepare themselves for starting a family earlier, just as women do. Even testing sperm health early on in the process of planning to have a family, can buy time to help improve sperm early and reduce the chance that sperm health is only investigated after trying is unsuccessful for some time. The test is quick and easy and relatively painless.
for most men and may reduce the need for the female partner to have costly and invasive testing.

It also helps us to adjust our expectations. If a 42 year old woman is trying to conceive with a man who is her age or 10-20 years older than she is, she can be realistic in knowing that her partner’s sperm is going to take time to repair and improve, so they as a couple can make decisions based on this.

If the sperm analysis shows poor quality sperm and/or poor DNA integrity, then some options open up. A decision might be to freeze some eggs to give the sperm time to repair (so that the woman’s egg quality doesn’t decline further) or to consider using donor sperm.

**How do we improve a decline in age-related sperm quality?**

To improve sperm quality due to an age-related decline, the treatment is similar to that of improving age-related egg quality issues. Improving sperm production involves the following steps:

- **Detoxification**

Remember how I talked before about the accumulation of chemicals in the body? Natural fertility specialists work to stimulate the detoxification pathways in the body and clear out this accumulation of chemicals. It’s not unreasonable to expect that it might take 3-6 months of detoxification treatment with a healthy diet and lifestyle, plus supplements to clean up the body. The 3-6 months of preconception treatment can then begin after this detoxification has been successful, which will focus on increasing the health of the sperm.

- **Improve mitochondrial function**

Our bodies are all made up of tiny little cells. Muscle cells, nerve cells, skin cells, brain cells, kidney cells … you get the picture. All the cells in your body contain mitochondria.

Mitochondria are your cells source of power – their ‘batteries’. They provide your cells with the energy they need to function. Mitochondria provide your body with energy by converting the food you eat into a form of energy (known as ATP) that your cells can use.

In the case of sperm cells, mitochondria’s most important function is in motility [6], which is the ability of the sperm to move properly through the female reproductive tract to reach and fertilise the woman’s egg [8].

Thankfully natural fertility specialists have many ways of being able to increase mitochondrial function in the body and this is one of the cornerstones of our treatment in treating age-related decline in fertility.

- **Reduce oxidation**
Oxidative stress occurs in the body when there are not enough antioxidants in your body to mop up free radicals. These free radicals cause damage to your cells and may be a significant reason why sperm cells become damaged.

Free radicals are formed naturally in the body during energy production, so we can’t avoid this, however free radicals also come from external sources, which we can avoid. These include drinking alcohol and coffee, smoking cigarettes and exposure to environmental pollutants [9], which include air pollution, chemicals in cleaning products and personal care products, radiation from electronic devices, solar radiation from the sun, and so on [10].

Numerous antioxidants have proven beneficial in treating male infertility, such as vitamin C, vitamin E, glutathione and coenzyme Q10 [1]. Antioxidants are also found in fruit, vegetables and wholefoods.

• Healthy diet and lifestyle plus supplementation and Acupuncture

Acupuncture, as well as specific botanical medicines, are documented in several studies as having a positive effect on sperm parameters. A multifaceted therapeutic approach to improving male fertility involves identifying harmful environmental and occupational risk factors, while correcting underlying nutritional imbalances to encourage optimal sperm production and function [1].

A number of nutritional therapies are shown to improve sperm counts and sperm motility, including carnitine, arginine, zinc, selenium, and vitamin B12 [1]. When taking supplements, it is important that you take practitioner-quality supplements and you take them at the correct dose, so speak to your natural fertility specialist about the right supplement for you.

How to Increase Sperm Health Through Diet and Lifestyle Changes

Reduce your exposure to free radicals

• Limit your intake of caffeine and alcohol
• Avoid sugar
• Change your personal care and cleaning products to natural brands
• Invest in a good quality water filter
• Stay away from fried food
• Be safe in the sun – moderate amounts of sun exposure are important for Vitamin D, but don’t let yourself fry
• Avoid smoking
• Reduce stress
• If you live in the city, spend some time outside in nature – air pollution is a major source of free radicals, so do yourself a favor and head to the bush and breathe in some clean fresh air once in awhile.

Increase your intake of antioxidants
• Try to eat some high-antioxidant foods every day. Doctors recommend two fruit and five vegetables daily. Flavonoids are antioxidants and are found in the skin of brightly colored fruit and vegetables such as such as berries, cherries, carrots, tomatoes and green leafy vegetables.
• Switch your coffee and black tea for healthy drinks such as herbal teas, fresh juices and smoothies.
• Use fresh herbs and spices in your cooking. If your food smells good and fragrant, it’s more likely that it will be high in antioxidants, too. Try herbs and spices like turmeric, cinnamon, basil, oregano, parsley and ginger.
• Take high quality supplements – speak to your Natural Fertility specialist about the specific antioxidants that will work best for your situation
• Doesn’t red wine contain antioxidants? Well yes, it contains resveratrol – but unfortunately not in quantities high enough to outweigh the negative impacts of the alcohol. Sorry!

Sleep soundly

• Aim for 8-9 hours of good quality sleep per night. Melatonin is a powerful antioxidant and is released in the body in peak amounts when it’s dark and begins at around 9-10 at night. That’s right – hit the sack early and your free radicals will be mopped up while you sleep!

Use your energy wisely

• It’s important not to use up all of your energy reserves each day, so that you still have some left for repairing your body at night. A useful rule of thumb is to try and only use up 75% of your energy each day.
• Exercise. Regular exercise has so many benefits – stress management, increased circulation, better moods, blood-sugar regulation and muscle toning. Try to get active for 30 minutes most days of the week.

What are your thoughts about these strategies to improve sperm health? What has been your experience? We’d love to hear from you.


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