Glutathione – The Master Antioxidant for Fertility, and For PCOS

Glutathione has been referred to as the “master antioxidant” and though it’s arguably the most important antioxidant out there, very few doctors know about it. Glutathione is produced by our own bodies (neat!), and is made up of three amino acids. It contains a whopping amount of sulfur, the compound that gives it much of its power. Glutathione can also be recycled, meaning that your body can use it over and over again. It’s main function is to quench all sorts of damaging chemicals that regularly float about in our bodies from inflammation and toxins. Each and every cell in our bodies need and use glutathione, and when it’s deficient, our health will suffer.

Genetics and Glutathione

Some people are naturally less able to recycle glutathione, due to their genes. We do offer testing for these genes in the clinic. For people who recycle less glutathione, there can be a much greater negative impact of toxins on our cells.

Glutathione and Fertility

Glutathione is important for both male and female fertility. It can improve sperm health and quality. When it comes to the women’s ovaries, glutathione has an important role to play. Our eggs develop slowly and gradually in a process known as folliculogenesis over a period of many months before ovulation occurs. During this process, the many cells surrounding the egg, known collectively as the follicle, replicate. Each one of these tiny cells requires glutathione to shield it from damage. As such, the egg quality is dependent on glutathione – one of the ovary’s main protectors.

In fact, research has shown that oocytes with higher levels of intracellular glutathione produce healthier, stronger embryos. Other research has shown that in our younger years, women’s ovaries actually have higher intracellular glutathione levels. As such, increasing our glutathione can potentially turn back the ovarian “clock”. Research has shown that glutathione deficiency is related to premature ovarian aging and even ovarian cancer. Another study found that for women undergoing IVF, higher levels of glutathione in a woman’s follicles translated into increased fertilization rates.

Glutathione and PCOS

For women with PCOS, glutathione is also exceptionally important. A recent study challenged a group of 36 lean women with PCOS with a load of glucose. As would be expected, the women produced higher levels of insulin and testosterone in response to the dose of sugar. The study concluded that the glucose caused a significant increase in the oxidative stress markers, lowering the glutathione levels – and that this *reduction in glutathione was associated with an increase in testosterone*.

Another study that set out to evaluate DNA damage in the ovaries of women with PCOS concluded that there may be significantly less glutathione in the ovary as a result of the condition. As many women with PCOS have seen when trying to conceive, egg quality is a key issue. Even for those women with PCOS who ovulate regularly, the time to conceive can be long – most often related to the quality of her follicles.

Glutathione is protective for the egg quality of women with PCOS and increasing these levels can not only improve the chances of conceiving but also can increase the general rate of ovulation.