

# Fewer fats over the festive season may be the perfect formula for men's fertility

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A diet low in fat and high in egg whites could be the key to boosting male fertility according to a new pilot study.

The research, by Dr. Karma Pearce from the University of South Australia in collaboration with fertility specialist Prof Kelton Tremellen, Repromed, and Flinders University, presents a direct link between diet

and [testosterone](#)—showing that what men eat could affect their fundamental male sex hormone.

The study is the first to identify that a diet high in any type of fat—including healthy mono-saturated fats such as olive oil—negatively impacts testosterone production over as little as five hours, yet one supplemented with egg whites, and to a lesser extent whey protein, can positively affect serum testosterone.

Globally, infertility affects 15 percent of couples, with the World Health Organization estimating that up to 25 percent of couples in developing countries are affected. While the causes are many and varied, 20-30 percent of the problems are attributed to male factors alone.

Lead researcher, Dr. Karma Pearce, says the preliminary findings present controversial insights over the shorter five-hour term about the link between testosterone and "healthy" monounsaturated fat, which is popularly considered to be a component of a healthy diet, including the Mediterranean dietary pattern.

"There's an assumption that 'good' fats and 'bad' fats perform as they're described—but what's surprising, is that it wasn't the type of fat that mattered at all, as an equal amount of the good and bad fats significantly suppressed testosterone production," Dr. Pearce says.

While the researchers acknowledge they have tested individual nutrients and the effects may be different in the context of whole food dietary patterns, their earlier work has shown that "Western diets" typified by fast food [dietary pattern](#) produced a 25 percent decrease in serum testosterone within an hour of eating, with levels remaining suppressed below fasting baseline for up to four hours.

"In this study we also found that consuming albumen—the protein in egg

whites—increased [testosterone levels](#), and did so by four-fold relative to fasting, while albumin, combined with the bad saturated fat somewhat ameliorated the effect of the bad fats on testosterone levels, providing another diet-based influencer of testosterone levels."

The study tested eight diet protocols (meals comprising polyunsaturated fat; monounsaturated fat; refined carbohydrate ([orange juice](#)); whey; egg white; and mixed meals of polyunsaturated fat and refined carbohydrate; polyunsaturated fat and egg white; refined carbohydrate (orange juice) and egg white) with four blood tests/hormone analyses taken before eating and at every hour afterwards for five hours.

Dr. Pearce says the study is one step in a series of work needed to support and enhance fertility.

While the study only analyses the impact of various dietary macronutrients on testosterone production, not sperm quality, the researchers believe the study results suggest at least the potential for diet to negatively impact on sperm production and fertility. The findings are extremely promising for couples trying to start a family.

"It's important to note that it's still early days and more research needs to be done, particularly at looking at the effect of these nutrients in the context of whole food dietary patterns over the longer-term," Dr. Pearce says. "Over the Christmas period, for infertile men, and men with lower than normal testosterone levels, lowering the overall fat content and possibly increasing whey or adding [egg whites](#) may lead to improvements in testosterone levels over the shorter term."

The next step in their research is to evaluate the longer-term effect of these nutrients on testosterone levels in the context of whole food dietary patterns.

"The Effect of Macronutrients on Reproductive Hormones in Overweight and Obese Men: A Pilot Study" is published in the journal *Nutrients*.

**More information:** Karma L. Pearce et al. The Effect of Macronutrients on Reproductive Hormones in Overweight and Obese Men: A Pilot Study, *Nutrients* (2019). [DOI: 10.3390/nu11123059](https://doi.org/10.3390/nu11123059)

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