

Experts say more research needed on pregnancy-boosting preconception diets

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Experts say more research is needed on preconception diets after a Monash University-led review found a lack of evidence about the best foods to help boost the chances of becoming pregnant.



They say while preconception diet is possibly a modifiable risk factor for infertility, there is no official guidance about which dietary approaches may improve fertility.

The study found benefits in the Mediterranean diet, reducing trans fats and consuming less junk food and sugar-sweetened drinks. But there was insufficient evidence to support a specific diet for improving fertility.

Published in *Human Reproduction Update*, the comprehensive analysis of existing evidence aimed to determine potentially effective dietary patterns and components around pre-pregnancy diet.

The team reviewed 36 studies published from 2007–2022 that included women of reproductive age during the preconception period, and evaluated preconception diet and fertility-related outcomes.

The plant-based Mediterranean diet, which includes fruits, vegetables, whole grains, beans, nuts, legumes, white meat and <u>healthy fats</u> from <u>olive oil</u>, had anti-inflammatory properties conducive to fertility and displayed the strongest and most consistent association with improved pregnancy rates.

Reducing trans fats and discretionary food intake were also consistent with broad healthy eating guidelines, had little to no risk, and offered a plausible set of possible pre-pregnancy fertility benefits. Seafood, dairy and soy demonstrated inconsistent findings across the few included studies.

Senior Author Associate Professor Lisa Moran, who heads the Monash Center for Health Research and Implementation's Healthy Lifestyle Research Program, said the preconception diet was supposedly a modifiable risk factor for infertility.



However, there was no official guidance for women about which dietary approaches may help. "This scoping review offers the most comprehensive overview of the relationship between type of diet and fertility and the evidence gaps that must be filled prior to adoption into clinical practice," she said.

"Most of the dietary advice regarding conception revolves around pregnancy rather than the pre-pregnancy or the pre-conception period, except for guidance on folic acid and iodine supplementation.

"Despite the increasingly accepted notion that improving nutritional intake improves fertility outcomes, there remains a lack of dietary advice for women in the preconception period in Australia and worldwide.

"We require evidence-based and tailored recommendations for women in the preconception period if we hope to improve fertility outcomes for the widest range of women."

The same team has already published a paper looking at the data from this review on the types of diets in more detail. This also underlined the benefits of the Mediterranean diet.

Senior Author Dr. Jessica Grieger, who leads the Nutrition, Metabolic and Reproductive health group within the Robinson Research Institute at the University of Adelaide, said more research was needed.

"We know that nutrition is important for <u>reproductive health</u> and the success of a healthy pregnancy," Dr. Grieger said. "We encourage further, high quality dietary studies to build the evidence, so that we can better support women and couples, when planning a pregnancy".

First author and Ph.D. candidate Simon Alesi said a father's diet was also



important. "While approximately 50% of infertility is caused by female factor infertility, 20–30% is a combination of both female and male factors," he said.

"Therefore, male fertility is also important and optimizing men's health will improve the likelihood of a couple conceiving. We are currently conducting a male review that links to this female review, and preliminary findings related to the potential for anti-inflammatory diets such as the Mediterranean diet to improve fertility are similar."

More information: Simon Alesi et al, Assessing the influence of preconception diet on female fertility: A systematic scoping review of observational studies, *Human Reproduction Update* (2023). DOI: 10.1093/humupd/dmad018

Provided by Monash University

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