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Women's Health, Fertility & the Microbiome: An Evidence-Based Perspective

with **Ro Huntriss**



Women's health and the role of the female microbiome are becoming increasingly important areas of research, with growing interest in how the microbiome may influence reproductive health and fertility. To explore this evolving field, we spoke with Ro Huntriss, Specialist Fertility Dietitian, to better understand the female microbiome, the factors that influence its balance, and its potential role in supporting women's health and reproductive wellbeing.

1 **Women's health is receiving more attention than ever, but there is still a significant gap in our understanding of how nutrition influences women across different life stages. Where do you think the biggest opportunities for nutrition to improve women's health currently lie?**

I think one of the biggest opportunities is moving from a reactive to a genuinely preventative, life-course approach to women's nutrition. Adolescence, pregnancy, postpartum, perimenopause and menopause are key windows where nutritional needs change and earlier intervention could support longer-term health.

We could also do much more to identify and address nutritional inadequacy — iron across the menstruating years, folate and iodine around preconception and pregnancy, and protein, calcium and vitamin D alongside resistance and weight-bearing exercise later in life. These may not be the most glamorous areas of nutrition, but they're likely to have far more impact than chasing the latest supplement or 'hormone-balancing' food.

2 **You have a particular focus on fertility nutrition. What are some of the most common misconceptions you encounter around diet and fertility—and what does the evidence actually tell us?**

One misconception is that once you start fertility treatment, there is nothing you can influence. Nutrition and lifestyle are part of the picture, not a magic bullet, but something that can meaningfully support fertility and treatment outcomes. There is also huge misinformation around restriction. Women are often told to cut out gluten, dairy, carbohydrates or sugar, despite there being no evidence that everyone needs to do this. Unnecessary restriction can actually make nutritional adequacy harder to achieve.

There's no single 'fertility diet' either. Healthy eating principles provide the foundation, but nutrition should be personalised to factors such as PMOS, endometriosis, male factor infertility or whether someone is preparing for embryo transfer. And importantly, fertility is a couple's issue, we shouldn't place the entire nutritional burden on women.

3 **PCOS affects millions of women, yet nutrition advice can sometimes feel confusing or contradictory. What do you think healthcare professionals should prioritise when supporting women with PCOS?**

The key thing is recognising that PMOS is highly individual. Two women can have the same diagnosis but very different symptoms, risks and priorities, so management needs to start with the woman, not a particular 'PMOS diet'.

We also need to move away from equating PMOS nutrition with weight loss. Weight management may be appropriate for some women, but it shouldn't automatically be the goal for everyone. Healthy lifestyle behaviours can improve health even without weight loss. There's also no single 'best' PMOS diet, whether low-carb, low-GI, ketogenic or Mediterranean. A healthy, sustainable dietary pattern is the foundation, then we personalise it around symptoms, metabolic health, nutritional needs, preferences and goals.

4 There is growing interest in the relationship between the gut microbiome, hormones and women's health. How do you see the gut microbiome fitting into the wider picture of women's health—and where is the evidence strongest at present?

The gut microbiome is one of the most exciting emerging areas in women's health because it sits at the intersection of nutrition, metabolism, immunity and hormones. We're learning that it changes with diet, medications and different life stages, so it could have an important role in personalised prevention and nutrition.

In PMOS, there's growing evidence of microbiome differences and links with insulin resistance, inflammation and androgen metabolism, but we're not yet at the point of defining a 'PMOS microbiome' or recommending probiotics routinely. There's also growing interest in vaginal microbiota and reproductive outcomes, alongside the gut–oestrogen relationship during hormonal transitions such as perimenopause and menopause.

The real opportunity is moving beyond simply measuring the microbiome to understanding which patterns matter, and how we can use diet, prebiotics and probiotics in a targeted way.

5 Women frequently move between different healthcare professionals when managing conditions such as PCOS, fertility problems or gastrointestinal symptoms. What role do you think dietitians can play within a multidisciplinary approach to women's health?

Women often move between GPs, gynaecologists, fertility specialists and other clinicians, alongside online information. Dietitians help connect that information and translate the evidence into practical, personalised advice to fit with medical care, symptoms and goals.

PMOS is a good example, where reproductive, metabolic and nutritional health can intersect. A dietitian brings those aspects together while working alongside the relevant healthcare professionals.

We also have an important role in navigating nutrition misinformation and recognising when someone needs medical investigation or another specialist. We're not replacing other professionals; we're adding nutritional expertise. I'd also like to see dietitians involved further upstream, across prevention, preconception, pregnancy, menopause and healthy ageing.

6 Looking ahead, what emerging area of women's health nutrition are you most excited about—and what do you think healthcare professionals should be paying more attention to?

I'm most excited about moving towards much more personalised nutrition across the female life course. We're already seeing this in PMOS, where the focus is shifting beyond weight loss towards metabolic health, reproductive goals, dietary quality and individual symptoms. I'd like to see the same depth of research develop across conditions such as endometriosis, menstrual disorders and menopause.

I'm also really excited about the microbiome. Our understanding of its role in women's health is advancing rapidly, and I think this will open the door to a new generation of products with the potential to meaningfully improve a wide range of women's health outcomes.

More about Ro:

Ro Huntriss is a Registered Dietitian and founder of Fertility Dietitian UK, with 15 years of experience across the NHS, private practice and commercial business. Specialising in women's health and fertility nutrition, she holds two Master's degrees in Advanced Nutrition and Clinical Research, is a published academic author and is the author of Deliciously Healthy Fertility.Ro was named Best Fertility Nutritionist 2025 by the European Fertility Society and is a four-time national award winner from the British Dietetic Association. She chairs the BDA's Women's Health and Fertility Specialist Group and is a member of the Parliamentary and Scientific Committee APPG.

As an educator, Ro supports healthcare professionals to develop their expertise through her award-winning Fertility Nutrition for Healthcare Professionals course and PMOS Nutrition course, translating research into practical, evidence-based care.

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