

TOPIC 8 • LIFESTYLE & FERTILITY

What we know about diet, exercise, body weight, smoking, alcohol, caffeine and preconception lifestyle interventions.

Why 8 core sources?

Eight is the ideal number here. The field is vast and easily becomes cluttered with contradictory or oversimplified advice. These eight sources provide balance: formal ASRM guidance, Cochrane evidence, a contemporary meta-analysis of preconception interventions, a major weight-loss RCT, a physical-activity review, a Mediterranean-diet review, formal smoking guidance and a contemporary preconception-nutrition review.

The evidence in context

Lifestyle affects general and reproductive health, but its relationship with fertility is neither simple nor equally strong for every factor. The adverse message for cigarette smoking is comparatively consistent. For weight, exercise and diet, important associations and general-health benefits exist, but interventions do not consistently increase live birth. For alcohol, caffeine and particular dietary patterns, evidence is more uncertain and depends on dose, population and outcome. The responsible approach is not to construct a 'perfect fertility lifestyle', but to reduce clear risks, support overall health and avoid guilt or false promises.

1. ASRM Practice Committee (2022)

Optimizing natural fertility: a committee opinion

[Original source](#)

What it studied → An official American Society for Reproductive Medicine committee opinion on factors that may influence natural fertility, including diet, smoking, alcohol, caffeine, recreational substances and environmental exposures.

What it found → ASRM states that evidence is insufficient to show that any specific diet or macronutrient pattern improves natural fertility. It encourages a healthy lifestyle, avoidance of smoking and recreational drugs, minimal-to-moderate alcohol and caffeine use, and 400 µg daily folic acid for women attempting pregnancy.

What it means in practice → This is the core framework for the website: there is no need to promote 'fertility diets' or rigid rules. The focus should be overall health and modification of factors for which meaningful evidence exists.

Limitations → A committee opinion synthesising available evidence rather than a single RCT. For several lifestyle factors the evidence is observational and does not establish causality.

2. Boedt et al. / Cochrane (2021)

Preconception lifestyle advice for people with infertility

[Original source](#)

What it studied → A Cochrane systematic review of seven RCTs involving 2,130 participants, assessing preconception advice on weight, alcohol, smoking and combined lifestyle change in

people with infertility.

What it found → Evidence quality was low to very low. Weight-loss advice did not clearly improve live birth, while RCT evidence for alcohol and smoking interventions was extremely limited.

What it means in practice → The message 'live healthier and your IVF will work' is not scientifically defensible as a general promise. Lifestyle support has value, but fertility outcomes must be communicated cautiously.

Limitations → Few RCTs, substantial uncertainty, small samples in some comparisons and inadequate reporting of several key outcomes.

3. Torkel et al. (2026)

Preconception lifestyle interventions for women - a systematic review and meta-analysis of intervention characteristics and behaviour change techniques

[Original source](#)

What it studied → A contemporary systematic review/meta-analysis of preconception lifestyle interventions in women planning pregnancy, assessing fertility, obstetric, anthropometric and metabolic outcomes as well as intervention characteristics.

What it found → Lifestyle interventions can improve selected behavioural and metabolic outcomes and, in some analyses, clinical pregnancy. Effectiveness appears to depend on how structured, intensive and well designed the intervention is.

What it means in practice → Generic advice to 'eat better and exercise' is not enough. When lifestyle support is offered, it should be individualised, goal-based, monitored and behaviourally realistic.

Limitations → Interventions varied considerably, and effects were not consistent across all fertility or obstetric endpoints.

4. Legro et al. (2022)

Effects of preconception lifestyle intervention on fertility outcomes: The FIT-PLESE randomized controlled trial

[Original source](#)

What it studied → A large randomized controlled trial in women with infertility and obesity comparing an intensive preconception weight-loss lifestyle programme with an intervention emphasising physical activity without the same weight-loss target.

What it found → The intensive programme produced greater weight loss but did not improve fertility or birth outcomes compared with the control intervention.

What it means in practice → Weight loss can have important general-health benefits, but it should not be presented as a guaranteed way to increase live birth before fertility treatment.

Limitations → The trial involved a specific population of women with obesity and a specific intervention design. It does not mean weight is irrelevant to reproductive health or that all lifestyle interventions are equivalent.

5. Mena et al. (2019)

The effect of physical activity on reproductive health outcomes in young women: a systematic review and meta-analysis

[Original source](#)

What it studied → A systematic review/meta-analysis of physical activity and reproductive outcomes in young women, including women with reproductive health problems and PCOS.

What it found → Interventions containing physical activity showed benefits for selected reproductive outcomes and, in some comparisons, higher clinical-pregnancy and live-birth rates.

What it means in practice → Regular movement can form part of a healthy fertility lifestyle, particularly where metabolic problems coexist. It should not be framed as a stand-alone infertility treatment or as a reason for excessive exercise.

Limitations → Substantial heterogeneity in type, intensity and duration of exercise, limited RCT evidence for some endpoints and frequent use of co-interventions.

6. Martín-Manchado et al. (2025)

Associations between adherence to a Mediterranean diet and assisted reproductive techniques outcomes: a systematic review

[Original source](#)

What it studied → A systematic review examining adherence to the Mediterranean diet in relation to ART outcomes including fertilisation, implantation, clinical pregnancy and live birth.

What it found → Findings were inconsistent. Some studies reported favourable associations, while others found no significant relationship with clinical pregnancy or live birth. Overall certainty was limited.

What it means in practice → The Mediterranean diet is an excellent general-health dietary pattern and a reasonable preconception choice, but it should not be marketed as a proven 'IVF diet' that increases live birth.

Limitations → Predominantly observational studies, differing diet-adherence scores, heterogeneous ART populations and low certainty for major outcomes.

7. ASRM Practice Committee (2024)

Tobacco or marijuana use and infertility: a committee opinion

[Original source](#)

What it studied → An extensive ASRM review of smoking, nicotine products, vaping and marijuana in relation to natural conception, ovarian function, semen parameters, pregnancy loss and ART outcomes.

What it found → For cigarette smoking, good evidence links use with impaired female fecundity, increased miscarriage and ectopic pregnancy risk, and poorer ART outcomes. Evidence for marijuana is much more inconsistent.

What it means in practice → Smoking is one of the lifestyle factors for which the message is comparatively clear: stopping before conception is a meaningful general-health and reproductive-health intervention.

Limitations → For ethical reasons, most smoking evidence is observational. Evidence on vaping and marijuana is newer, smaller and considerably more uncertain.

8. Laven et al. (2025)

Nutrition for Preconception Health and Fertility

[Original source](#)

What it studied → A contemporary review of preconception nutrition and the relationships between nutrients, dietary patterns and modifiable factors such as BMI, alcohol and caffeine with reproductive health.

What it found → The review supports optimisation of overall nutritional status before conception and identifies BMI, alcohol and caffeine as modifiable factors, while emphasising complex interactions and the need for further research.

What it means in practice → The responsible message is not 'eat these five foods to get pregnant', but a high-quality overall dietary pattern, adequate key micronutrients and individualised preconception advice.

Limitations → A review rather than an intervention trial. Many nutritional findings arise from observational data and remain susceptible to confounding.

Library conclusion

The website should avoid both ignoring lifestyle and overstating it. Some modifiable factors genuinely deserve attention - particularly smoking, overall diet quality, physical inactivity and metabolic health where relevant. But no 'fertility diet', individual food, exercise programme or weight-loss target should be presented as a guaranteed route to pregnancy or IVF success. The aim is better health and better preparation, not shifting responsibility onto the woman.

Template for future maintenance

Maintain separate evidence categories for diet/dietary patterns, physical activity, BMI/metabolic health, smoking/nicotine, alcohol/caffeine and multicomponent lifestyle interventions. Every new study should be classified according to whether it measures natural fecundability, clinical pregnancy, live birth or only an intermediate marker. For every source: Full citation + link → What it studied → What it found → What it means in practice → Limitations → Date last reviewed.