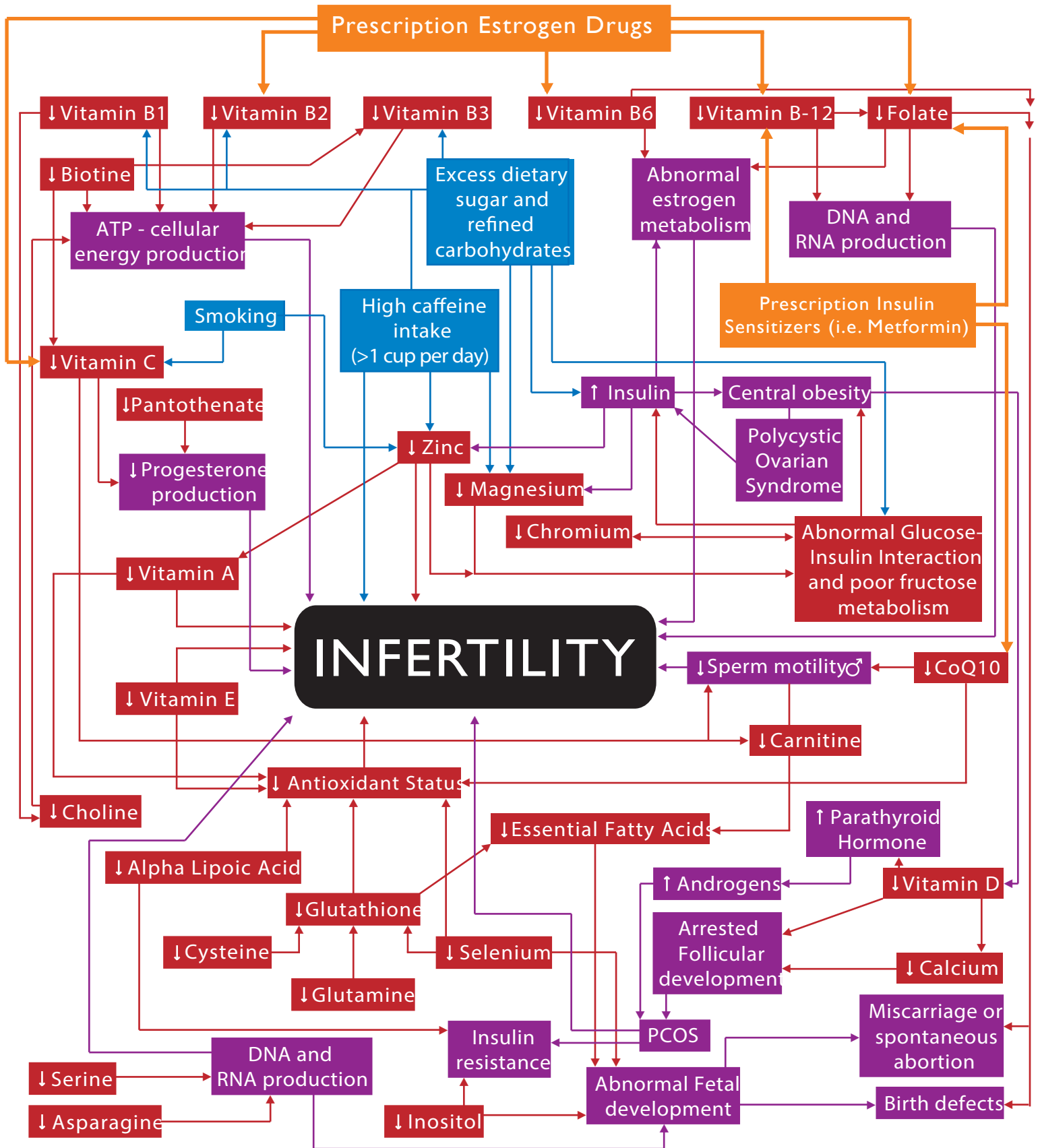


Infertility and Micronutrient Deficiencies

Developed by Dr. Peter Osborne



Key:

- Commonly Prescribed Medications (Orange box)
- Vitamins, Minerals or Other Nutrient Deficiencies (Red box)
- Physiological Condition or Consequence (Purple box)
- Environmental or Lifestyle Factors (Blue box)

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Factors Affecting Fertility

1. Vitamin C Deficiency – lowers progesterone production.
2. Vitamin D Deficiency – causes arrested follicular development.
3. Vitamin A Deficiency – teratogenic defects and increased new born morbidity risk.
4. Vitamin E Deficiency – causes infertility.
5. General B-Vitamin Deficiency – decreased ATP and cellular energy production.
6. Folic Acid Deficiency – leads to spontaneous abortion and neural tube defects.
7. Vitamin B12 Deficiency – reduced DNA and RNA production.
8. Pantothenate Deficiency – lowers progesterone production.
9. Vitamin B6 Deficiency – disrupts estrogen metabolism.
10. Vitamin B3 Deficiency – increased DNA damage.
11. Calcium Deficiency – abnormal hormonal messaging.
12. Magnesium Deficiency – disrupts estrogen and progesterone metabolism.
13. Zinc Deficiency – leads to birth defects, low birth weight, and infertility.
14. Chromium Deficiency – worsens blood sugar and exacerbates PCOS.
15. Selenium Deficiency – increases sperm and egg cell oxidation.
16. Choline Deficiency – abnormal fetal nervous system development.
17. Inositol Deficiency – causes abnormal fetal development.
18. Low Carnitine And Glutathione Levels – abnormal fetal development, birth defects, & spontaneous abortion.
19. Low Carnitine And CoQ10 Levels – reduction in sperm motility and sperm count.
20. Poor Antioxidant Function – contribute to both male and female infertility.

Other Factors Affecting Fertility:

21. Estrogen containing medications – cause folate, B-12, and B-6 deficiencies which contribute to birth defects and spontaneous abortion.
22. Excess sugar and dietary carbs – contribute to central obesity and PCOS risk. Excess carbs deplete zinc and magnesium. Both of these nutrient deficiencies contribute to infertility.
23. Smoking – causes zinc and vitamin C loss. Vitamin C deficiency causes a reduction in progesterone production which in turn contributes to infertility. Zinc loss contributes to infertility and low weight birth (premature birth).
24. Metformin and Glucophage – as well as other medications used to treat PCOS dysinsulinemia cause vitamin B-12 and folate deficiency thus contributing to the risk of birth defects and spontaneous abortion. These meds also deplete CoQ10 (antioxidant status) contributing to infertility risk.
25. High caffeine (coffee) intake – Contribute to infertility. Can cause magnesium, zinc, B-1, and other water soluble nutrient deficiencies.
26. Inadequate Sun light – causes vitamin D deficiency which in turn can create excess androgen production contributing to the worsening of PCOS. Additionally, vitamin D deficiency can cause an arrest in follicular development.