



# PRECONCEPTION NUTRITION: KEY NUTRIENTS

NUTRIENT	EFFECT ON FERTILITY	FOOD SOURCES
<b>Zinc</b>	<ul style="list-style-type: none"><li>• Critical for menstrual cycle, ovulation and healthy oocyte and sperm production, high levels found in semen</li><li>• Boosts testosterone</li><li>• Healthy immune function</li><li>• Deficiency strongly associated with infertility and miscarriage</li></ul>	<ul style="list-style-type: none"><li>• Oysters, grass lean red meats</li><li>• Pumpkin, sunflower, chia, linseeds, tahini, cacao</li><li>• Nuts, legumes, eggs</li><li>• Whole grains</li><li>• Mushroom, sundried tomatoes</li></ul>
<b>Folate</b>	<ul style="list-style-type: none"><li>• Healthy oocyte and sperm production</li><li>• Metabolism of homocysteine</li><li>• Reduces neural tube defects</li><li>• Common genetic variation in folate metabolism, speak to your fertility specialist and/or nutritionist about supplementing with specific folates</li></ul>	<ul style="list-style-type: none"><li>• Green leafy veg: rocket, spinach, kale, broccolini, sprouts</li><li>• Beetroot, asparagus</li><li>• Legumes, nuts, tahini, quinoa, rice</li><li>• Eggs, liver, salmon</li></ul>
<b>Vitamin B12</b>	<ul style="list-style-type: none"><li>• Supports oocyte quality and maturation as well as implantation</li><li>• Improves all sperm parameters</li><li>• Healthy methylation and metabolism of homocysteine</li><li>• Reduce neural tube defects</li></ul>	<ul style="list-style-type: none"><li>• Grass fed lean red meats</li><li>• Oysters, mussels, abalone, scallop</li><li>• Oily fish</li><li>• Eggs</li></ul>
<b>B6</b>	<ul style="list-style-type: none"><li>• Supports implantation, growth and development</li><li>• Metabolism of homocysteine</li><li>• Deficiency associated with infertility</li><li>• Regulates hormones such as prolactin and progesterone</li></ul>	<ul style="list-style-type: none"><li>• Legumes</li><li>• Nuts and seeds, oats</li><li>• Oily fish, grass fed lean meat, organ meats, chicken, egg yolk</li><li>• Eggplant, cucumber, spinach, avocado, bananas, carrot</li></ul>
<b>Selenium</b>	<ul style="list-style-type: none"><li>• High concentrations found in sperm, improves sperm parameters and testosterone production</li><li>• Major antioxidant, protects sperm and oocyte from damage</li><li>• Thyroid hormone production, reduce antibodies</li></ul>	<ul style="list-style-type: none"><li>• Brazil nuts, sunflower seeds, chia seeds, oats</li><li>• Oily fish, grass fed lean meats and poultry, oysters, eggs</li><li>• Mushrooms, spinach</li><li>• <i>Upper limit: 400mcg/day</i></li></ul>
<b>Choline</b>	<ul style="list-style-type: none"><li>• Foetal brain development and cognitive function</li><li>• Gene expression</li><li>• Healthy methylation and metabolism of homocysteine</li></ul>	<ul style="list-style-type: none"><li>• Eggs, oily fish, grass fed lean meat and poultry</li><li>• Legumes, peanuts</li><li>• Broccoli, cauliflower, spinach, avocado, mushrooms</li></ul>
<b>Calcium</b>	<ul style="list-style-type: none"><li>• Important for both sperm physiology and function</li><li>• Supports oocyte maturation and fertilisation</li></ul>	<ul style="list-style-type: none"><li>• Nuts and seeds, legumes</li><li>• Tofu, eggs, oily fish, oysters, hard cheese, yoghurt</li><li>• Green leafy veg, parsley</li></ul>

<b>Iodine</b>	<ul style="list-style-type: none"> <li>• Thyroid hormone production, general metabolism</li> <li>• Foetal brain and neurological development</li> <li>• Deficiency linked to infertility</li> </ul>	<ul style="list-style-type: none"> <li>• Seafood, seaweed, sea vegetables</li> <li>• Brazil nuts, eggs, yoghurt, hard cheese</li> <li>• Oats, peanut butter, iodized salt</li> </ul>
<b>Iron</b>	<ul style="list-style-type: none"> <li>• Haemoglobin, red blood cell production and other iron dependent enzymes</li> <li>• Maternal iron status best optimised during preconception period</li> <li>• Iron overload and haemochromatosis associated with male infertility</li> </ul>	<ul style="list-style-type: none"> <li>• Organic and grass fed lean red meats, oysters, seaweed</li> <li>• Tempeh, tofu, legumes, quinoa, brown rice, buckwheat, oats</li> <li>• Pumpkin seeds, chia seeds, linseed, tahini, nuts, cacao</li> <li>• Sundried tomatoes, green leafy veg, parsley</li> </ul>
<b>Vitamin A</b>	<ul style="list-style-type: none"> <li>• Improves sperm parameters</li> <li>• Growth and development of oocyte</li> <li>• Antioxidant support</li> <li>• Iron metabolism, haemoglobin production, red blood cell formation</li> </ul>	<ul style="list-style-type: none"> <li>• Carrot, sweet potato, kale, spinach, rocket, pumpkin, tomato, capsicum, apricots, avocado, seaweed, chilli, lettuce</li> <li>• Oily fish, liver, egg yolk</li> <li>• <i>Upper limit: 10,000IU/day</i></li> </ul>
<b>Vitamin D</b>	<ul style="list-style-type: none"> <li>• Regulation of calcium</li> <li>• Improves sperm parameters and testosterone production</li> <li>• Improves insulin resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Sunlight</li> <li>• Oily fish and other seafood, chicken, turkey, eggs</li> <li>• Mushrooms, sprouted seeds</li> </ul>
<b>Vitamin E</b>	<ul style="list-style-type: none"> <li>• Improves IVF fertilisation rates</li> <li>• Improves sperm parameters, high levels naturally found in semen</li> <li>• Maintains healthy of the ovaries, regulates hormonal balance</li> <li>• Antioxidant support</li> </ul>	<ul style="list-style-type: none"> <li>• Nuts and seeds</li> <li>• Olive oil, olives</li> <li>• Eggs, oily fish, seaweed</li> <li>• Capsicum, eggplant, tomato</li> </ul>
<b>Vitamin C</b>	<ul style="list-style-type: none"> <li>• Improves sperm parameters, high levels naturally found in semen</li> <li>• Antioxidant support</li> <li>• Healthy immune function</li> </ul>	<ul style="list-style-type: none"> <li>• Lemons, oranges, mandarin, kiwi fruit, capsicum, guava, strawberries, papaya, cherries, tomato, chilli, parsley</li> <li>• Brussel sprouts, broccoli, kale, rocket, spinach, seaweed</li> </ul>
<b>DHA Omega-3</b>	<ul style="list-style-type: none"> <li>• Sperm and oocyte cell membrane stability, fluidity and energy production</li> <li>• Reduce inflammation</li> </ul>	<ul style="list-style-type: none"> <li>• Fresh fatty fish: salmon, tuna, mackerel, sardines (2-3 per week)</li> <li>• Walnuts, chia, hemp seeds, flax, seaweed, algae, eggs, avocado</li> </ul>
<b>Chromium</b>	<ul style="list-style-type: none"> <li>• Healthy blood glucose regulation, improve insulin sensitivity</li> <li>• Can support weight loss</li> </ul>	<ul style="list-style-type: none"> <li>• Abalone, seaweed, oily fish</li> <li>• Psyllium, almonds, broccoli, potato, parsley, olives, pear</li> </ul>
<b>Magnesium</b>	<ul style="list-style-type: none"> <li>• Involved in sperm production, found in seminal fluid</li> <li>• Blood sugar regulation</li> <li>• Stress management</li> </ul>	<ul style="list-style-type: none"> <li>• Pumpkin seed, linseed, sunflower seeds, chia, poppy seeds, tahini</li> <li>• Brazil nuts, almonds, cashews, pine nuts</li> <li>• Rice, quinoa, amaranth, oats, legumes, tofu, eggs, cacao</li> <li>• Green leafy veg, coconut, fig</li> </ul>
<b>Probiotics</b>	<ul style="list-style-type: none"> <li>• Supports gastrointestinal and particularly vaginal microbiome</li> <li>• Bacterial vaginosis and associated dysbiosis linked with infertility</li> </ul>	<ul style="list-style-type: none"> <li>• Certain lactobacilli strains – seek the advice of a trusted Clinical Nutritionist</li> </ul>