

# Heme Synergy

Iron with Erythropoiesis Nutrients

**Orthoplex White Heme Synergy contains a highly absorbable Iron bisglycinate with a new scientifically informed cofactor blend to uniquely support the entire process of red blood cell production and haemoglobin synthesis, while also helping to maintain energy levels.**

Carefully developed in a vegan-friendly, ultra-low excipient formula, Heme Synergy provides two forms of Folate and Vitamin B12 as part of a full Activated B complex. Along with Vitamins A and C, this specialised cofactor blend enhances gastrointestinal absorption, aids mobilisation of iron stores and supports iron utilisation.

- ✓ Complete erythropoiesis formula
- ✓ Full Activated B Complex
- ✓ Contains Folinic and Levomefolic acid
- ✓ Contains Hydroxocobalamin and Mecobalamin
- ✓ Vegan-friendly
- ✓ Ultra-low excipient



- ✓ Gluten Free
- ✓ Dairy Free
- ✓ Egg Free
- ✓ Soy Protein Free
- ✓ Vegan
- ✓ Vegetarian

AUST L 316883

**Pack Size:** 30 capsules

**Adult Dose:** Take 1 capsule daily or as recommended by your registered healthcare practitioner.

**Storage:** Store below 30°C in a cool, dry place away from direct sunlight.



Full disclosure of excipients in every formulation

## Indications

- Aids healthy red blood cell production.
- Supports red blood cell health
- Helps support haemoglobin formation
- Supports energy levels

## Excipients

Vitamin A palmitate, microcrystalline cellulose, glycine, leucine, colloidal anhydrous silica, Vcaps®.

## Warnings

*When taken in excess of 3000 micrograms retinol equivalents, vitamin A can cause birth defects. If you are pregnant, or considering becoming pregnant, do not take vitamin A supplements without consulting your doctor or pharmacist. The recommended daily amount of vitamin A from all sources is 700 micrograms retinol equivalents for women and 900 micrograms retinol equivalents for men. Not for the treatment of iron deficiency conditions. Vitamin and mineral supplements should not replace a balanced diet. If symptoms persist, talk to your health practitioner.*

## Contraindications

Chloramphenicol, Retinoids  
Suitable in pregnancy & lactation

*Information taken from Natural Medicines Database and accurate as of September 2019*

## Each Capsule Contains

Iron (II) glycinate	24mg
Calcium ascorbate dihydrate	121.7mg
Retinol palmitate equiv. Vitamin A (2500 IU)	1.375mg 750mcg RE*
Thiamine hydrochloride equiv. Thiamine	5mg 3.93mg
Riboflavin sodium phosphate	10mg
Nicotinamide	20mg
Calcium pantothenate equiv. Pantothenic acid	10mg 9.16mg
Pyridoxal 5 phosphate monohydrate equiv. Pyridoxine	5mg 3.19mg
Biotin	100mcg
Calcium folinate equiv. Folinic acid	110mcg 100mcg
Levomefolate calcium	109mcg
Mecobalamin (Co-methylcobalamin)	200mcg
Hydroxocobalamin	200mcg

\*RE - Retinol Equivalents

*Please note Orthoplex White products can only be purchased if you are an Orthoplex White approved customer. This medicine may not be right for you. Read the warnings before purchase. If symptoms persist talk to your health professional.*



[www.bioconcepts.com.au](http://www.bioconcepts.com.au)



# Technical Information

## Aids healthy red blood cell production

**Vitamin A** - Is involved in several steps of red blood cell production or erythropoiesis, intestinal absorption of Iron and the mobilisation of Iron from body stores.<sup>1</sup> Evidence of the importance of Vitamin A in iron utilisation within the body is well researched. For example, observational studies from eight developing countries found a consistent strong correlation between haemoglobin and plasma retinol concentrations in women of reproductive age who consumed adequate Iron in their diets, and were neither pregnant nor lactating. In another study, preschool children consumed 360µg retinol equivalents (RE) daily for 6 months, resulting in increased serum Iron and reduced ferritin concentrations. Since the dietary Iron was unchanged in these children, the improvements were due to Vitamin A mobilising existing body Iron stores leading to increased Iron availability to tissues.<sup>1</sup>

**Folate (Folic acid and Methylfolate)** - Low levels of Folate slows down the synthesis phase of cell division, impeding germ cell maturation, and leading to the development of abnormal red blood cell precursors (megaloblasts) in bone marrow. Megaloblasts have larger than normal cell and nucleus diameters. Cell proliferation is altered and those that reach maturity are ingested by bone marrow macrophages. The result is disrupted erythropoiesis, reduced numbers of new erythrocytes in circulation, and macrocytic anaemia.<sup>1</sup>

**Vitamin B12 (Hydroxocobalamin and Methylcobalamin)** - Is an essential cofactor in at least two key transmethylation reactions, one of which closely interrelates with Folate in DNA synthesis and haematopoiesis, leading to megaloblastic anaemia. Supplementing with Folate alone can mask concomitant Vitamin B12 deficiency.<sup>1</sup>

**Riboflavin sodium phosphate** - A riboflavin-dependent mechanism exists for Iron mobilisation – a flavin mononucleotide (FMN)-dependent oxidoreductase catalyses the removal of Iron from ferritin, making it available for heme synthesis.<sup>1</sup> Clinical trials have shown that Vitamin B2 has a positive effect on haematological status, improving response to Iron supplementation.<sup>1</sup>

**Vitamin C** - Aids Iron absorption from the gastrointestinal tract by forming an Iron chelate complex with ascorbate that is more alkaline in the small intestine and therefore more able to be absorbed.<sup>1</sup> Vitamin C also enables the mobilisation of Iron from storage and may prevent haemolysis resulting from compromised cellular antioxidant defence mechanisms.<sup>1</sup> For example, a study among vegetarian Indian women saw haemoglobin increase by 8%, serum Iron by 17% and ferritin increase by 12% from baseline after consuming 1000mg Vitamin C daily even though Iron intake was unchanged.<sup>1</sup>

**Vitamin B6 (Pyridoxal 5-phosphate)** - Is a cofactor for 5-aminolevulinic acid synthase which is involved in heme synthesis. Insufficient levels of Vitamin B6 have been found to contribute to microcytic anaemia independent of Iron availability.<sup>2</sup>

## Supports energy production

It is important to support energy production in those with low Iron levels; B vitamins and Iron not only improve erythropoiesis, but also support mitochondrial function and acute energy production.

References available on request.

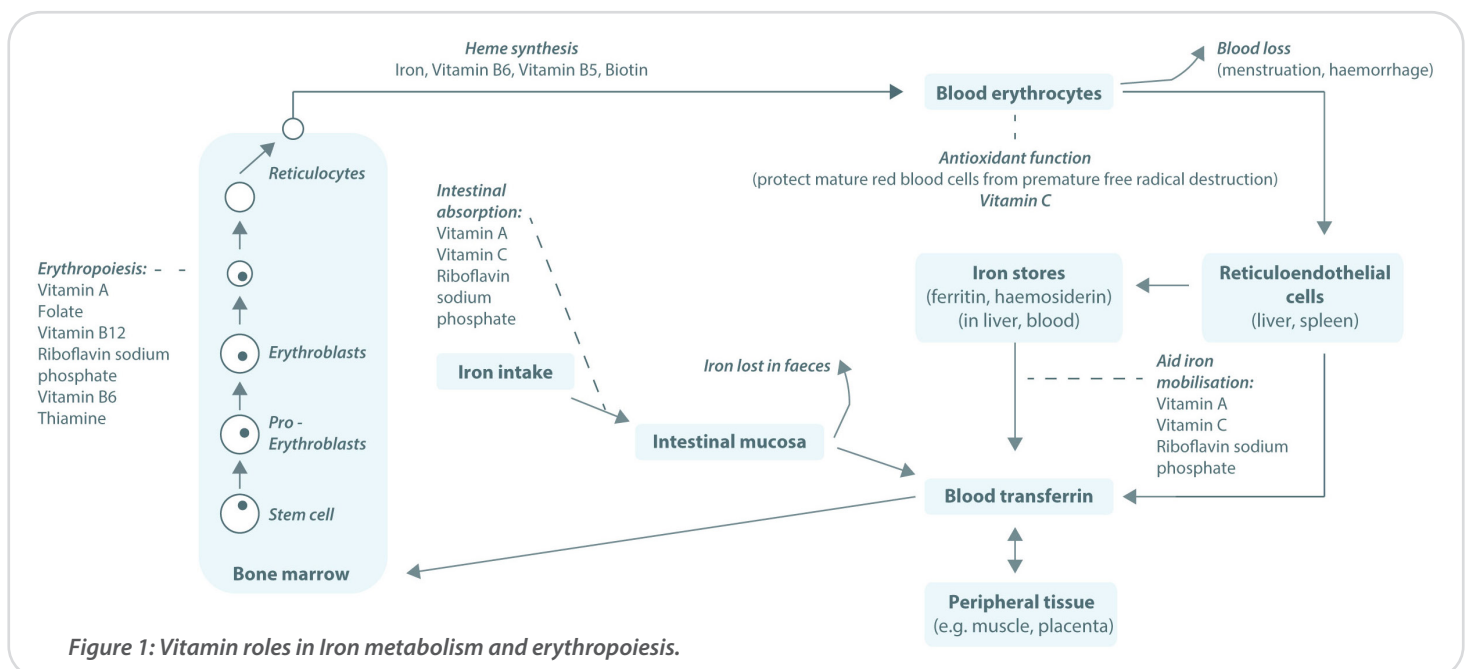


Figure 1: Vitamin roles in Iron metabolism and erythropoiesis.