



ZINC

ARE YOU ZINC DEFICIENT ?

Signs of zinc deficiency: white nail flecks on two or more finger nails; inflamed cuticles, transverse nail lines, stretch marks, poor skin and hair condition including dandruff and loss of hair, poor sense of taste, frequent infections, poor appetite, ADHD/ADD etc.

The **Zinc Taste Test** is carried out using 0.1% zinc sulphate solution (developed by Professor Bryce Smith in his work with anorexics and established to be as effective as sweat testing). The test measures the activity of gustrin, a zinc dependent enzyme required for taste.

LOW: Tasteless, like water.

MARGINAL: Slightly dry, mineral, furry or even sweet taste, develops after a few seconds.

OK: Definite taste that intensifies with time.

GOOD STATUS: Strong unpleasant taste noticed immediately

WHY ARE YOU ZINC DEFICIENT ?

You may be exposed to things in your diet or environment which antagonise or impede optimal zinc absorption such as tartrazine (E102), phytates (e.g. wheat bread), tannic acid (e.g. black tea), cadmium (e.g. cigarette smoking), drinking water from copper supply pipes, the contraceptive pill or IUD (raise the body's copper), some anti-depressant medications (check with your GP), fizzy drinks (high in phosphate antagonist), alcohol and coffee, lead (air pollution, water pipes, paint etc.).

WHY DO I NEED ZINC ?

Zinc is also an important nutrient required:

- A. For the production of pancreatic protein digesting enzymes (e.g. carboxy-peptidase) and stomach acid, to ensure optimal digestion.
- B. To aid utilisation of available protein.



- C. To aid repair of any damaged tissue including intestinal mucosa, necessary for best nutrient absorption, preventing malabsorption.
- D. For manufacture of all the body's protein products e.g. muscle and bone (structure), antibodies (immunity-to prevent infection, cancer), hormones (e.g. thyroxin or thyroid hormone which governs metabolic rate) and oxygen transport (haemoglobin). See A, E, G etc.
- E. For manufacture of key neurotransmitters from amino acids responsible for mental state and mood (e.g. serotonin which is needed along with Vitamin B₆ by the enzyme 5HTP carboxylase for the final conversion step of 5HTP to serotonin), dopamine etc.
- F. For manufacture of essential fatty acids such as GLA and AA, vital for best and balanced mental function and state, all round good health (required for many body functions) and adequate energy.
- G. For insulin synthesis and storage and whence blood sugar balance, helpful in appetite balance management.
- H. Male fertility: sperm and testosterone production.

HOW TO REDRESS A DEFICIENCY

Reduce antagonisers: See why am I deficient.

Improve Dietary Sources such as pumpkin seeds (pumpkin seed butter now available, through your nutritionist *), egg yolk, fish (animal zinc most bio-available), crustaceans (especially oysters), pecan nuts, oats, rye, peas, ginger, thyme, black pepper. Use organic where possible to avoid artificial NPK fertiliser which antagonises zinc.

Phone the Nutri-Centre Tel. 020 7637 8436. Product Code: HINOPB 344/568 (grams).
Pumpkin Seed Butter. A food spread-rich carotenoids and with n3 fats too as well as zinc.
Cost: £12.25/£14.90.

Supplementing: 45mg per day (as picolinate, gluconate or citrate) is recommended for 3-6 months. For Children using BC Nutrisorb Zinc 5 (3-6 months), 10 (6-12 months) or 20 drops(12 months or older) per day in divided doses. Supplementation should only be taken under a nutritional therapist guidance.



References:

Bryce-Smith, Derek (1989) "Zinc deficiency — the neglected factor", *Chemistry in Britain*, 1989, pp 783-786.

Holford, Patrick and Pfeiffer, Carl (1996) *Mental Health: The Nutrition Connection*, London, ION Press, 1996 (1st ed.).

Tuormaa, Tuula E. (1995) Adverse Effects of Zinc Deficiency, *Goldalming, Foresight*. (1st published in the *J. of Orthmolecular Med.* 10 (3 and 4), pp 149-164, 1995.).

Werbach, Melvyn (1999) *Nutritional Influences on Mental Illness*, Tarzana, Third Line Press Inc., 1999 (2nd ed.).