

ESSENTIAL FATTY ACIDS (EFA's) and ECZEMA

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Pharmacy Skin Specialists Public Forum**

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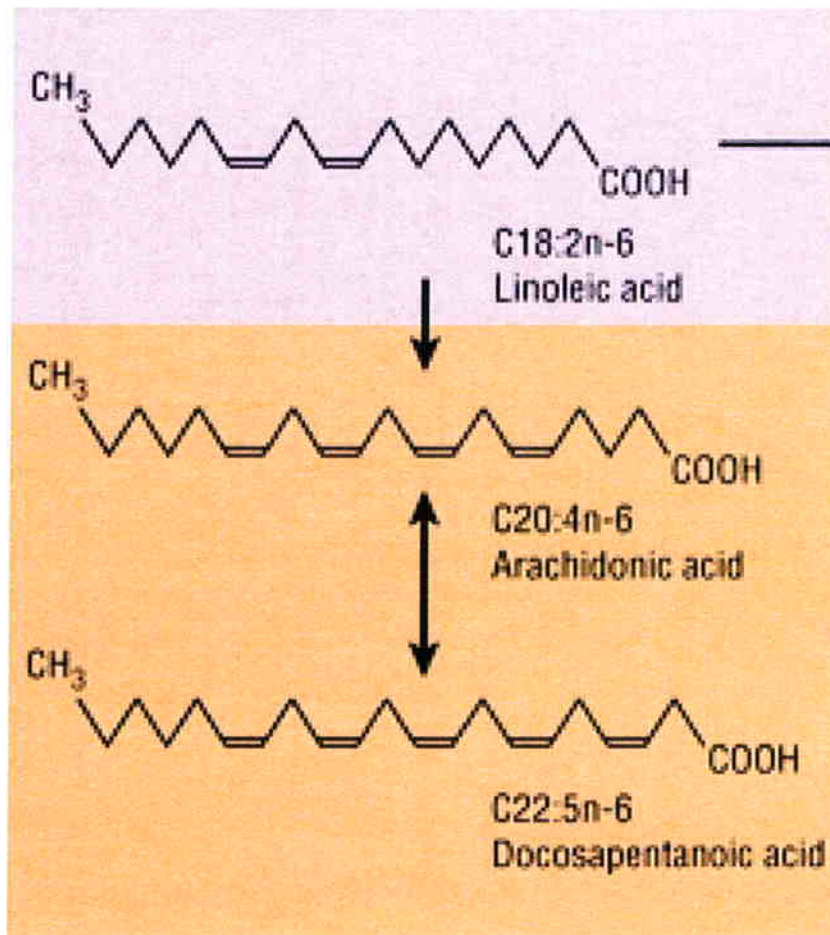
EFA's DISCUSSION

1. What are EFA's ?
2. What are the actions of EFA's in Eczema ?
3. Inflammation
4. What are the functions of the Skin ?
5. EFA's – Omega 3 (first major type)
6. EFA's – Omega 6 (second major type)
7. What interferes with the production of EFA's to prevent inflammatory conditions such as Eczema ?
8. What enhances the production of the favourable 20 carbon chain intracellular EFA's
9. Research

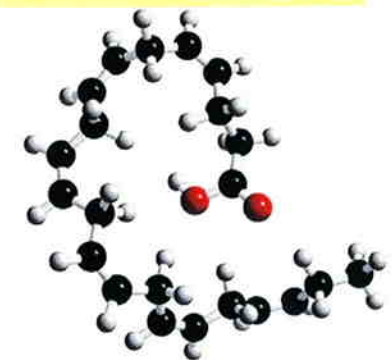
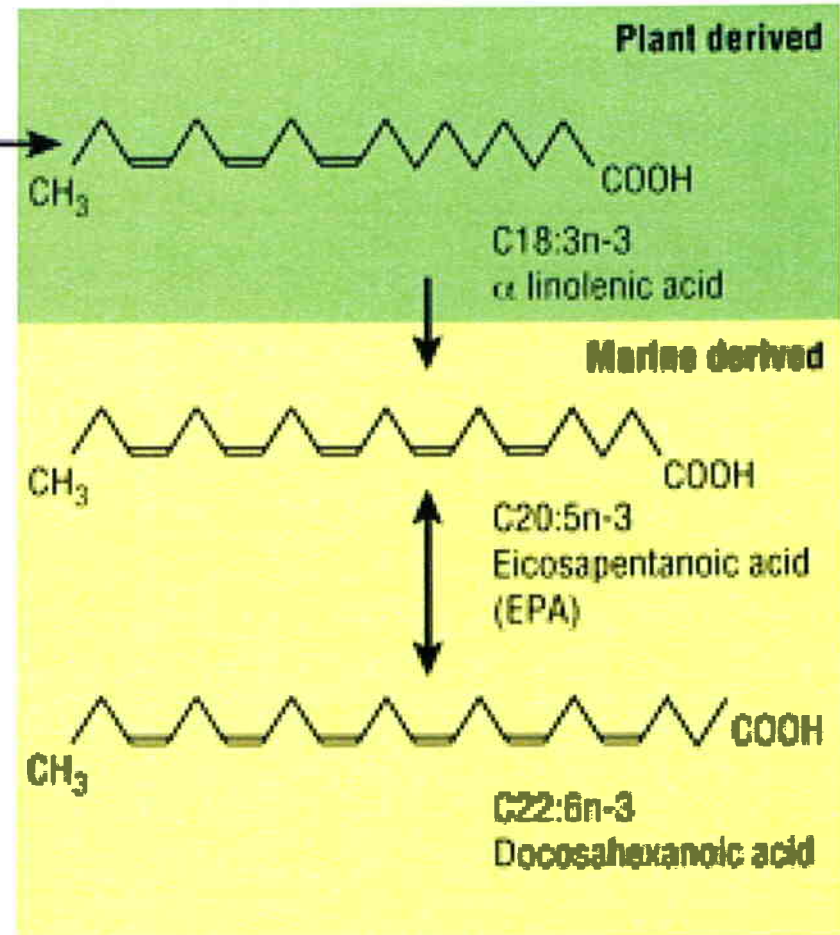
WHAT ARE ESSENTIAL FATTY ACIDS (EFA's)

- EFA's are **good fats**
- They are 18-20 **long carbon** chain and unsaturated
- **Bad Fats** are **short chain** fats and saturated
- **Essential** – refers to the fact that like some vitamins they cannot be made by the body and must be taken in the diet

Omega 6 fatty acids



Omega 3 fatty acids



WHY EFA's ARE SO IMPORTANT

- EFA's are required for all cell membranes; their deficiency in the skin is associated with eczema
- Australians generally do not have enough good fats – nuts, seeds and fish.
- These fats are important for **skin** and brain
- They protect against diabetes, cancer, arthritis and heart disease
- They are seldom tested in the general population

ACTIONS OF EFA's IN ECZEMA

EFA's protect the skin by:

- Providing a permeability barrier
 - Makes the skin more waterproof
 - Keeps out allergens and germs, chemicals and other irritants
- Having an anti-inflammatory reaction

INFLAMMATION

Inflammation has 5 components

Think of eczema –
but any condition
ending with “itis” –
eg dermatitis,
cystitis, sinusitis,
colitis, bronchitis,
otitis

RUBOR – RED

CALOR – WARM

TUMOR – SWOLEN

DOLOR – PAIN/IRRITATION

“KAPUT” –IMPAIRED

FUNCTION

WHAT ARE THE FUNCTIONS OF THE SKIN?

- Protection from trauma
- Insulation from cold
- Keeps water in the body
- Protects the body from outside agents
- Stores fat soluble nutrients including EFA's

The skin is the largest organ in the body

2 MAIN TYPES OF EFA's

1. Omega 3, mostly fish oils

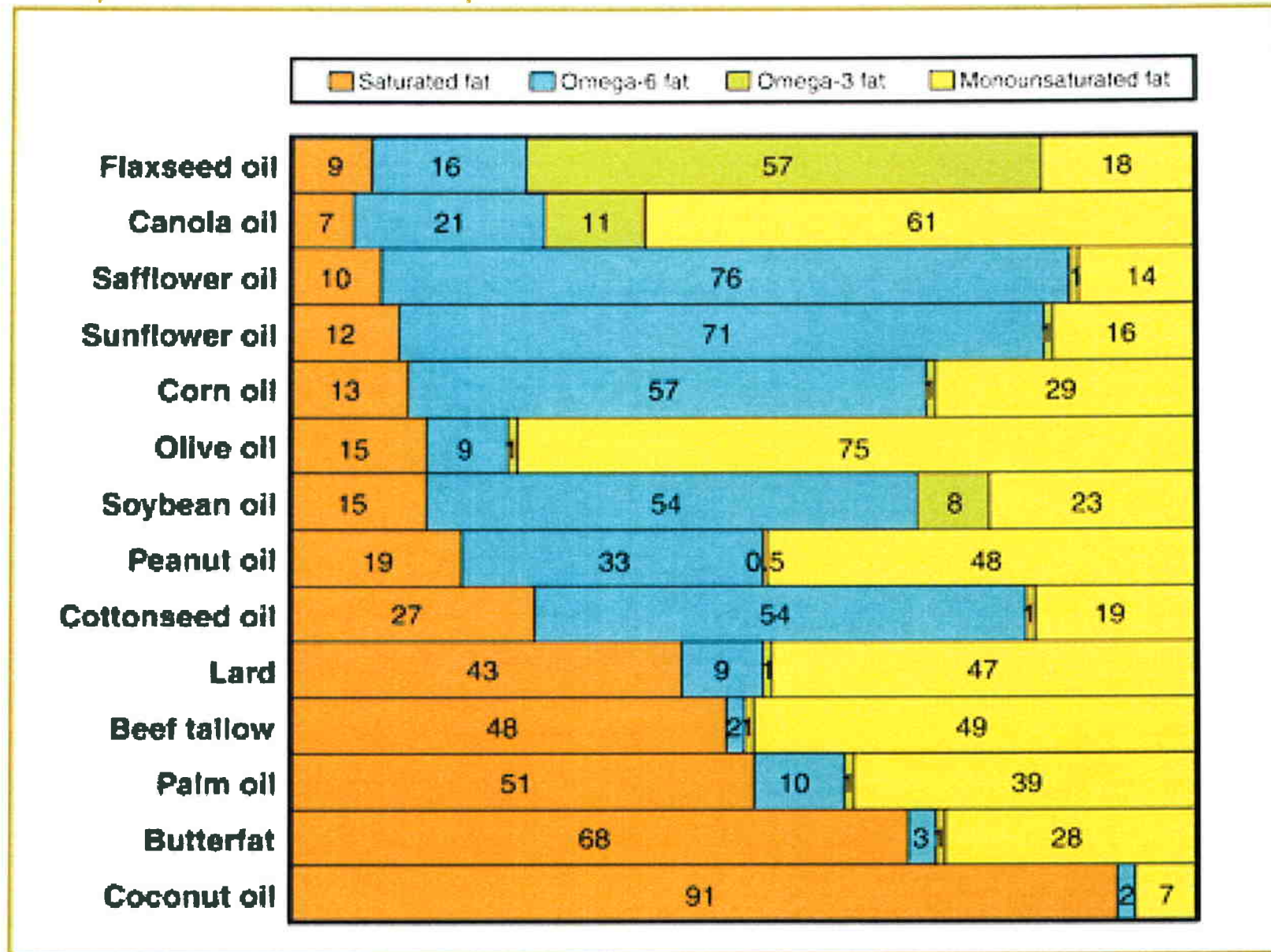
- This refers to oils from fish as well as flax seeds, walnuts, soy/tofu and canola oils
- If intake is low -
 - Eat fish x 3 times per week
 - Supplement with Max Epa or other fish oils, 2 caps per day
- Omega 3 fats prevent inflammatory conditions and are useful in skin conditions, joint inflammation and asthma

MAIN TYPES OF FATS—cont.

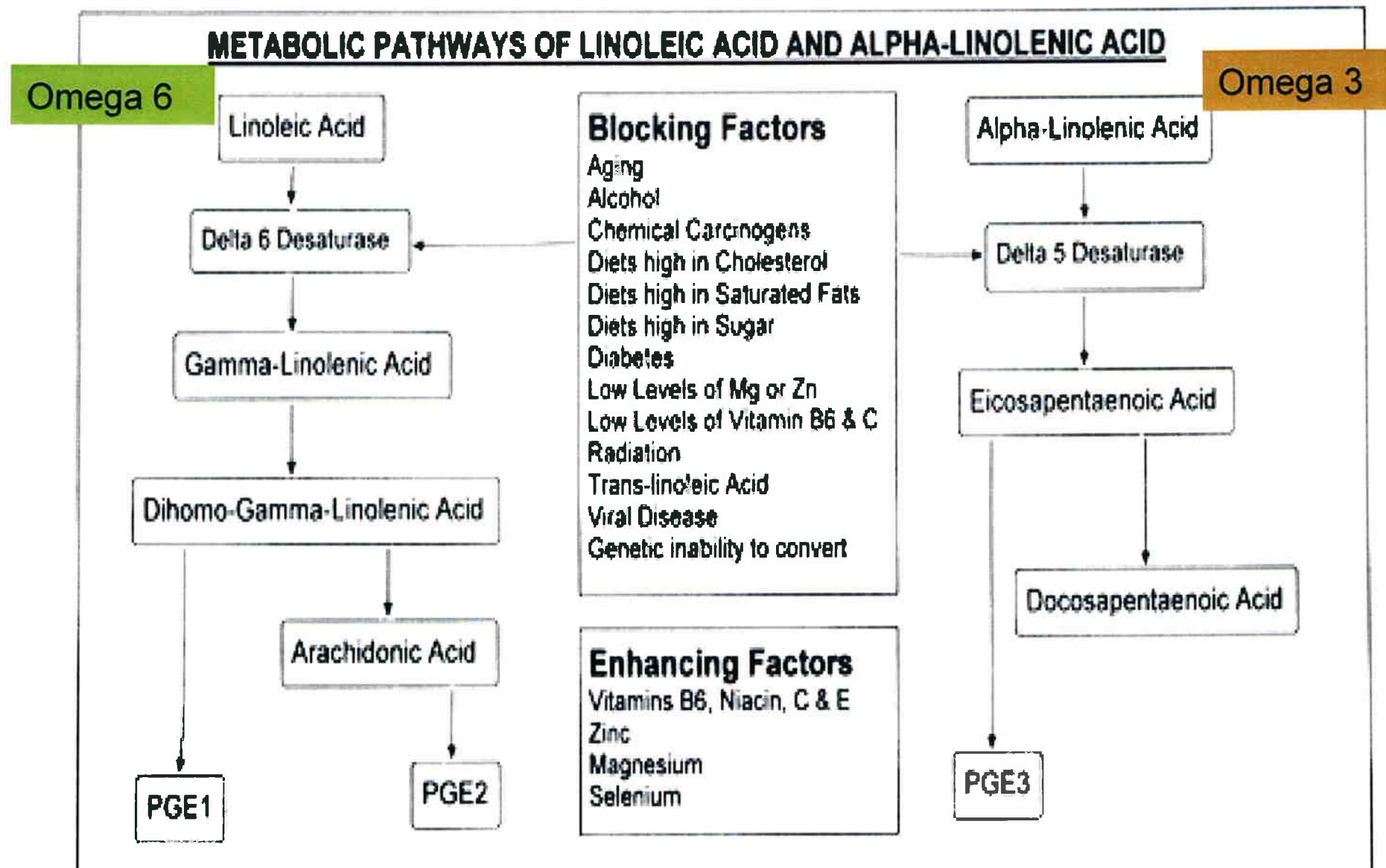
2. Omega 6; these are plant oils

- If low intake the addition of:
 - Nuts and seeds such as pumpkin, walnut soy, grape seed oil, corn oil, safflower and sunflower oil –this Mediterranean type diet is best long term
- Short term catch-up:
 - Evening Primrose oil 1000mg x 2 capsules twice daily x 2 months and then reduce to 1 capsule twice daily
- The Omega 6 fatty acids help skin conditions, immune system, premenstrual tension, ADD/ADHD and fluid retention, arthritis

Comparison of Dietary Fats and Oils Plant and Animal Sources



THINGS THAT INTERFERE WITH PRODUCTION OF GOOD EFA'S



ENHANCING PRODUCTION OF FAVOURABLE EFA's

Thus the delta 6-desaturase enzyme, which promotes the conversion of the less favourable dietary 18 carbon molecules to the better intracellular 20 carbon molecules can be “up-regulated” by supplementation with Mg, Zn and B6

Supplements:

Biozinc tabs: one or two daily (Blackmores)

Or Zymin (Orthoplex): 1 daily

Or Zinc Drink: 1 teaspoon daily (5ml)

RESEARCH

Evening primrose oil (EPO)

20 trials with 700 patients

Itch was better with EPO $p < 0.0001$

Objective measurements:

Roughness – laser scan, Bonn Germany

Dryness – moisture content

SUMMARY

- Fish and Mediterranean diets results in good dietary intake of omega 3 and omega 6 EFA's respectively
- Their favourable actions are enhanced by supplementation with magnesium, zinc and B6
- Genetic and environmental factors may prevent the optimal production of the more favourable EFA's