UNDERSTANDING ESSENTIAL FATTY ACIDS
("Essential" means your body can't make it. "PG" means Prostaglandin)

PG1
Linoleic Acid (LA)
c18:2w6
Parent Oil: corn, soy, safflower, sunflower

GLA
Gamma Linolenic Acid (GLA) c18:3w6
Source: seed oil of Black Currant
Vitamin B6
Borage, Evening Primrose
Vit B6
Weak Long Chain Poly Unsaturated Fatty Acids

DGLA
Dihomo Gamma Linolenic Acid (DGLA) c20:3w6
Source: Human breast milk
Needs: Zinc, Iron, Selenium, Biotin, Vit C, Vit E

PG 2
Arachidonic Acid (AA) c20:4w6
Sources: Meat, milk, egg, Shrimp, seaweed

PG
Anti inflammatory A,B
Lipoxygenase A
Cyclooxygenase A,B

PG
Highly Inflammatory

PG 3 PATHWAY
Alpha Linolenic Acid (ALA) C18:3w3
Parent Oil: Flax seed (linseed), walnut, chestnut, soy

SDA
Stearidonic Acid c20:5w3

Delta 6 Enzyme Blocked by:
Alcohol
Saturated fats
"Trans" or hydrogenated fats
Deficiencies of B3, B6 and Zinc
Some Chemicals, Some Viruses

Enzymes not as effective:
The very young (perinatal)
Allergic families
Diabetics
Advancing age (>40)

Delta 5 desaturase

Delta 5 desaturase

Highly Inflammatory A,B

Deficient PG 1 in:
Asthma
elevated cholesterol
eczema
hyperactivity
hypertension
pre-menstrual syndrome
thrombosis
vascular spasm

Excess PG 2 in:
angina
Arthritis
Asthma
Inflammatory Bowel disease
diabetes
depression
cancer
food allergy
menstrual cramps
Multiple Sclerosis
thrombosis

Deficient PG 3 in:
acne
dandruff
elevated triglycerides
learning impairment
auto-immune disease
thrombosis
Inflammatory Bowel Disease
Bipolar depression (*EPA)
depression (*EPA)
Schizophrenia (*EPA)
ADHD (*DHA)
Schizophrenia
Cystic Fibrosis (*DHA)

* Treat with high levels
Note: A=Steroids block here, B=NSAIDS block here, Modulation is better than blocking.
Modified from Leo Galland