Omega fatty acids are located in the phospholipid layer of every cell in the cow’s body (except for red blood cells).

The cow’s balance of omega fatty acids is completely controlled by what she is fed, because she cannot manufacture them on her own.

The balance of inflammatory omega-6s vs. anti-inflammatory omega-3s determines how the cow responds to immune stressors in her environment at the most basic level.

Overreact = Lost Energy. Underreact = Lost Health.
STRESSORS
Trigger production of substrates from omega fatty acids to activate immune response.

**INFLAMMATORY OMEGA-6s**
- **Linoleic Acid**
- **Arachidonic Acid**

- **Lipoxygenases**
  - 12-HETE, 15-HETE, LTA₄

- **Leukotrienes**
  - LTB₄, LTC₄, LTD₄, LTE₄

- **Lipoxins**
  - LXA₄, LXB₄

**ANTI-INFLAMMATORY OMEGA-3s**
- **Linolenic Acid**
- **EPA/DHA**

- **Resolvins**
  - RVE₁, RVE₂, RVD₁, RVD₂, RVD₃, RVD₄

- **Protectins**
  - PD₁

- **Prostaglandins**
  - PGD₂, PGE₂, PGF₂, PGI₂

- **Thromboxanes**
  - TXA₂

**Cyclooxygenase**
- **COX-1 & COX-2**

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