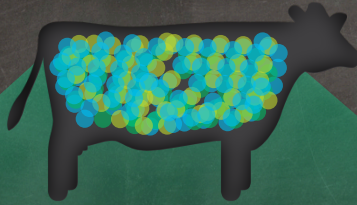




QUICK GUIDE TO OMEGA FATTY ACIDS & IMMUNE BALANCE



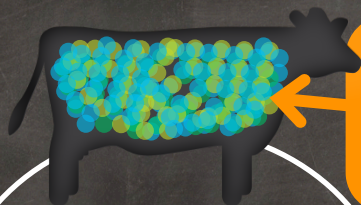
Overreact = Lost Energy. Underreact = Lost Health.

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.

QUICK GUIDE TO OMEGA FATTY ACIDS PATHWAYS FOR IMMUNE REGULATION



STRESSORS

Trigger production of substrates from omega fatty acids to activate immune response.

**INFLAMMATORY
OMEGA-6s
LINOLEIC ACID →
ARACHIDONIC ACID**

**ANTI-INFLAMMATORY
OMEGA-3s
LINOLENIC ACID
EPA/DHA**

Lipoxygenases

12-HETE, 15-HETE, LTA₄

Leukotrienes

LTB₄, LTC₄,
LTD₄, LTE₄

Lipoxins

LXA₄,
LXB₄

Resolvins

RVE₁, RVE₂,
RVD₁, RVD₂,
RVD₃, RVD₄

Protectins

PD₁

Cyclooxygenase

COX-1 & COX-2

Prostaglandins

PGD₂, PGE₂, PGF₂, PGI₂

Thromboxanes

TXA₂