



# CONSEQUENCES OF RESOLVING INFLAMMATION SLOWLY



Parturition

Adapted from Bradford SW Conf. 2018; Thatcher, UFL, 2008

- Inflammation is the necessary and natural response to an insult. **The problem is excess inflammation.**
- **Slow Resolution** leads to chronic inflammation. **Rapid Resolution** is key for productivity, reproduction & health.
- There is a high concentration of **inflammatory events** from dry-off through calving, including mammary tissue remodeling, placental expulsion (RPs), uterine involution and body condition loss.
- **Immune imbalance is often diet-induced** with excess Omega-6s vs. Omega-3s, producing more PGF2 $\alpha$  and increasing the inflammatory response.
- **Resolvins and Protectins** are specialized immune molecules (derived from EPA/DHA), driving the resolution of inflammation & preventing immune system over-response.

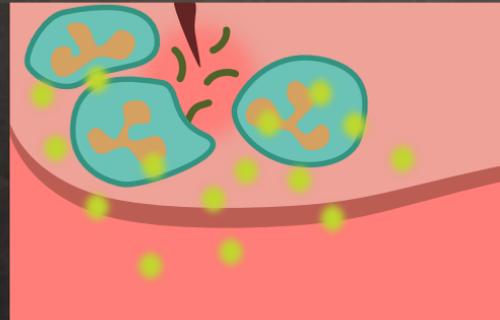


# THE ROLE OF EPA/DHA DERIVED RESOLVINS & PROTECTINS

**Neutrophils** rush in as first responders to an insult, whether it be stress, infection, injury or diet-induced.



**Resolvins** and **Protectins** (derived from EPA/DHA omega-3s) act as the 'brakes' that prevent too many neutrophils from responding, preventing excess inflammation.



**Resolvins** and **Protectins** actively resolve inflammation by sending in **Macrophages**, which 'clean up' the damage and helps with tissue repair.



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