"Pearls" of Veterinary Medicine

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AT A GLANCE

Clinical Pathology – Critical Care

NRBCs are not prognostic in regenerative anemia

Nucleated red blood cells (NRBCs) can be found in a wide range of diseases, including anemia, neoplastic, autoimmune, traumatic, and inflammatory conditions. NRBCs may be present in peripheral blood in healthy puppies up to two months old but should be considered abnormal in older dogs. **In anemic dogs—especially those with regenerative anemia—the appearance of NRBCs most commonly reflects bone marrow response to erythropoietic stimulation and does not predict prognosis**.

However, in certain acute or severe diseases such as heat stroke, acute trauma, and systemic inflammatory response syndrome (SIRS), NRBCs may have greater prognostic significance, as higher NRBC counts in these conditions have been linked with increased complications and mortality. The presence of NRBCs in peripheral blood is frequently accompanied by leukocytosis, particularly neutrophilia, which may parallel systemic inflammation and often signals more severe underlying pathology.

Hollmann F, et al. Front Vet Sci (2025);12:1585168
Cap Rep (2025).44(1): *1*

Gastroenterology

Fecal microbiota transplantation (FMT)

SCAN ME

A comprehensive gut health strategy combines dietary changes, prebiotics, probiotics, postbiotics, bacteriophages, and fecal microbiota transplantation (FMT) to treat microbiome imbalances which may control conditions such as inflammatory bowel disease, chronic enteropathy [ref] [ref] [ref]], atopic dermatitis [ref], chronic kidney disease [ref] and behavioral disorders [ref] such as cognitive dysfunction syndrome [ref].

Prebiotics (such as pectin, inulin, psyllium husk, acacia,fructo-oligosaccharides, and mixed insoluble fibers) feed beneficial bacteria, while **probiotics** (such as *Saccharomyces boulardii* (e.g., Mycequin)) provide transient benefits, particularly against *Clostridium difficile* and during antibiotic therapy. **Postbiotics** deliver ready-made microbial metabolites to accelerate healing [ref] [ref]. **Bacteriophages** offer targeted action against pathogenic bacteria [ref] [ref].

FMT has shown success in treating parvoviral enteritis, acute diarrhea, and chronic enteropathies. FMT, delivered via enema or oral capsules, safely induces durable microbiome changes. [ref]. Guidelines and protocols for FMT can be found here and commercial products sold by AnimalBiome here.

Smith, B. JAVMA (2025);263(S2):S45-S52
Cap Rep (2025).44(1):1

Fresh vs. Kibble: Macronutrients Drive Canine Gut Changes Without Dysbiosis

Eubiosis reflects a balanced, healthy gut microbiome with high diversity and beneficial bacteria. **Dysbiosis**, marked by reduced diversity, loss of beneficial taxa, and pathobiont

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