Understanding the enteritis syndrome
Enteritis is a growing problem worldwide, particularly in flocks where:
- antibiotic digestive enhancers have been removed
- anticoccidial withdrawal times have been extended
- grain-based diets are fed
- coccidiosis vaccines are used

Bacterial enteritis is not a single disease—there are two different causes and three different forms:

**CAUSE:** *Clostridium perfringens*
**FORM:** Clostridial Enteritis/Necrotic Enteritis

**CAUSE:** Non-specific bacterial overgrowth
**FORM:** Dysbacteriosis (not necessarily associated with *C. perfringens*)

Accurate diagnosis is necessary for effective treatment, because each form requires a specific treatment protocol.

### Forms and medication protocols

#### Clostridial enteritis/Necrotic enteritis
Disease of the small intestine associated with proliferation of *Clostridium perfringens* causing mortality and diarrhea. Subclinical form often goes undiagnosed. Economic losses begin early before mortality is seen.

**Medication protocol:** Strategically medicate with an antibiotic effective against *C. perfringens*.

#### Cholangiohepatitis
Clostridial infection affecting the liver, leading to enlargement, fibrosis and often jaundice, with condemnations at processing.

**Medication protocol:** Strategically medicate with an antibiotic effective against *C. perfringens*.

#### Dysbacteriosis
Presence of abnormal flora in the small intestine that causes diarrhea and/or malabsorption, but does not increase mortality.

**Medication protocol:** Treat with an antibiotic immediately when observed. Consider using litterbox to detect wet droppings early. Strategic preventive therapy may not work.

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Coccidiosis?

If you have a problem, consult with Elanco.
Diagnosis: Is it coccidiosis? Is it bacterial enteritis?
If bacterial enteritis, which form?

**Clinical signs:**
- Wet litter, diarrhoea
- Passage of undigested feed
- Elevated mortality possible
- Increased condemnations at slaughter possible

**Enteritis**

- Severe and extensive necrosis, classic necrotic enteritis
- Larger patches of necrosis
- Focal necrosis
- Lesions can be easily removed by scraping with a scalpel

**Diagnose**

- **Clostridial enteritis**
  - **Post mortem:** Intestinal necrosis
  - **Clinical:**
    - Usually occurs between 15 and 25 days
    - Drop in growth rates, diarrhoea, mortality, huddling, depression, rough feathers

- **Dysbacteriosis**
  - **Post mortem:** Thin-walled intestine, intestinal inflammation, watery intestinal content, orange mucus in intestine
  - **Clinical:**
    - Sticky droppings
    - Wet litter
    - Sometimes foamy caecal droppings
    - Reduced feed intake
    - Reduced physical activity
    - Normal or increased water intake
    - Normal mortality
    - Selective feeding behaviour may be observed

**Treat**

- **Clostridial enteritis**
  - Implement a strategic medication program.
  - (Remember, economic losses begin in the earliest disease stages before mortality is seen.)

- **Dysbacteriosis**
  - To confirm diagnosis:
    - Treat with antibiotic and monitor results.
    - Does condition resolve with treatment?
      - **Yes:** Continue antibiotic treatment. Consider using litterboxes on other farms to detect wet droppings early (information available from Elanco).
      - **Important:** To get best results, treatment should be initiated as early as possible.
      - **No:** Enteritis not related to coccidiosis or bacterial overgrowth, consider:
        - Viruses
        - Feed issues
        - mycotoxins
        - fat quality/ rancid fat
        - biogenic amines

* Always perform microscopic examination before confirming or eliminating an Eimeria maxima diagnosis.
## Enteritis summary

<table>
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<th>Treatment considerations</th>
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### Economic and performance impact of enteritis

In a survey of poultry experts worldwide, 43% of veterinarians reported that performance losses start at subclinical levels. Other studies confirm the serious economic impact of enteritis:

- **Feed conversion**: 4-10 point decline
- **Live weight**: reduced 30-120g/bird
- **Mortality**: increased 1-5%
- **Condemnations**: increased by up to 1%
- **Poultry experts** calculate the cost of enteritis at US$0.05/bird or more

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