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## Intestinal or colonic spirochaetosis

Porcine intestinal spirochaetosis (PIS) or porcine colonic spirochaetosis (PCS) was first described in the UK in 1980 and is caused by *Brachyspira pilosicoli*. Pigs have a variable loss of condition with a resulting increase in days to market. *B. pilosicoli* is a distinct species of *Brachyspira* that has many diverse strains (in Finland virtually each farm has its own strain). *B. pilosicoli* has a human health significance in that it is able to colonise in people who are immunocompromised or live in poor sanitary conditions.

## Epidemiology

PIS/PCS has been seen in most pig producing countries as diagnostic methods improve and antimicrobial growth enhancers are withdrawn.

It is generally the case that *B. pilosicoli* is found on farms with persistent diarrhoea problems but rarely seen on farms that have no diarrhoea.

*B. pilosicoli* can infect a wide range of animals, including pigs, dogs, birds and man (infected wild waterfowl can contaminate a farm's water supply). These have implications when you are trying to keep PIS/PCS out of your herd.

Transmission occurs via the faecal-oral route and this disease can be introduced into a herd via asymptomatic carrier animals. The disease recurs in pens that are not adequately cleaned and sanitised between batches. Shedding in the faeces can be intermittent and in some animals last for many weeks.

*B. pilosicoli* is susceptible to most disinfectants although the efficacy of some is reduced by the presence of pig faeces and other organic matter.

## Pathogenesis

Once the *B. pilosicoli* reaches the large intestine it breaches the mucus that covers the colonic surface and adheres in large numbers to the mucosa where damage occurs. *B. pilosicoli* colonisation and/or disease expression can be influenced by diet.

## Clinical signs

PIS/PCS often happens after weaning or when recently mixed growers are placed on a new diet, but this disease can also occur in finishers, pregnant sows and recently introduced breeding stock.

The first signs are a hollowing of the flanks and the passage of loose faeces, which may also be sticky. In weaners and growers this progresses into a mucoid diarrhoea which occasionally contains mucus and even blood. The diarrhoea is usually self-limiting lasting from 2-14 days. Sometimes relapses occur in some animals. Ill thrift and poor performance ensues.

Concurrent illnesses may be present including swine dysentery, salmonellosis and proliferative enteropathy or infections such as PCV2.

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