

# Faecal Pancreatic Elastase in Dogs – Determination and Diagnostic Value

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**Background:** Due to its sensitivity and specificity (93 %) the determination of faecal pancreatic elastase 1 (E1) is a reliable test for the diagnosis of chronic pancreatic disorders in humans.

**Aim:** To assess the diagnostic value of E1 for the diagnosis of exocrine pancreatic insufficiency (EPI) in dogs.

**Methods:** Faecal pancreatic elastase was determined immunologically in 52 dogs with chronic diarrhoea using polyclonal anti human E1 antibodies. Ceruletid test with serum canine trypsin-like immunoreactivity (cTLI) determination and chymotrypsin activity test were carried out in all dogs.

**Results:** In 22 dogs E1 concentrations were between 0.2 and 8.0 mg/g (group 1). In 30 patients (group 2) E1 was < 2.0 mg/g (detection limit). In all but one dog of group 1 serum cTLI was > 5.0 ng/ml and there was an increase in cTLI between 1.8 and 32.3 ng/ml with the Ceruletid test. Chymotrypsin activity was > 1.0 U/g in 20 dogs.

In 11 dogs of group 2 serum cTLI values were < 5.0 mg/ml. In all but one dog the TLI concentration remained < 5.0 ng/ml with the Ceruletid test. Chymotrypsin activity was less than 1.0 U/g in 5 dogs and normal in 6 dogs. Serum cTLI concentrations > 5.0 ng/ml were found in 19 dogs but 4 patients had no increase in cTLI with the Ceruletid test and also had abnormal chymotrypsin activities. In two of these dogs pancreatic atrophy was confirmed morphologically. The other 15 dogs showed an increase in serum cTLI between 1.5 and 33.3 ng/ml after stimulation with ceruletid and only two had chymotrypsin values < 1.0 U/g.

**Conclusions:** Faecal pancreatic elastase in dogs can be determined immunologically using polyclonal anti human E1 antibodies. The results have shown that this test is highly sensitive for EPI in dogs. However, there are specific differences between man and dog.

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