Pyridoxine

Pyridoxine is also known as vitamin B6 and is comprised of pyridoxal phosphate and pyridoxamine phosphate. These are cofactors involved in transamination and decarboxylation of amino acids and glycogen mobilisation from the liver.

• Clinical signs

Pyridoxine deficiency is quite rare and most likely to be seen in birds on high protein diets, especially methionine. Deficient chicks show depressed appetite, depressed growth, chondrodystrophy (causing bowing of leg bones) and nervous signs, which are characterised by jerking of the legs when walking and occasionally spasmodic fatal convulsions. In ducklings pyridoxine deficiency manifests itself as poor feed consumption and growth, hyperexcitability, weakness, anaemia, convulsions and death. A deficiency of this vitamin causes a collagen defect. In adult birds pyridoxine deficiency causes weight loss and depressed egg production and hatchability.

• Treatment

Treatment is via replacement therapy.

Cobalamin

Cobalamin is also known as vitamin B12. This vitamin plays a role in nucleic acid, carbohydrate and fat metabolism.

• Clinical signs

Deficiency of this vitamin can result in slow growth, decreased efficiency of feed utilisation, mortality, reduced egg size and hatchability. Vitamin B12 has been reported as a cause of myelin degeneration in chicks and can cause chondrodystrophy when methyl donors such as choline, methionine and betaine are lacking. Cobalamin deficient embryos show a peak mortality at day 17 of incubation. They are reduced in size and show muscle atrophy of the legs, diffuse haemorrhaging, chondrodystrophy, oedema and fatty livers.

• Treatment

Treatment is via replacement therapy.

Note: with many of the B vitamin deficiencies showing similar clinical signs a multi-B vitamin product is often preferred for treating birds rather than a specific B vitamin.