Chelated Minerals: Effect on Absorption from the Digestive Tract

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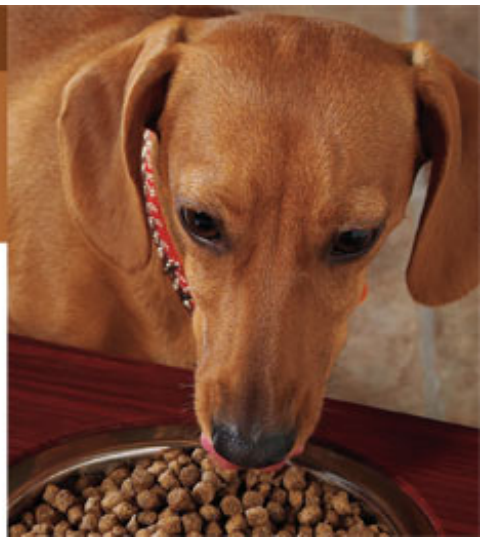
why are chelated minerals BETTER?



When reading the ingredient listing on various pet foods, you may see that some minerals are "chelated." The term 'chelate' is derived from the Greek word chele, or claw. As a general definition, it refers to the process of stabilizing a metal ion by binding it to certain other chemical substances, usually amino acids or organic compounds. For example, inorganic calcium can be bound to the organic compound lactic acid, to form the organic molecule calcium lactate.

When a mineral is chelated for use as a supplement or food ingredient, it is usually bound to an amino acid or protein. The mineral by itself has an electrical charge, either positive or negative depending upon the type of mineral. It will be bound to an protein with the opposite charge, and the final result will be a neutral molecule. The theory is that a neutral chelated molecule will be more completely absorbed than a non-chelated form.

Whether a mineral is better absorbed by the body when it is in a chelated form depends upon the mineral. Scientific studies have shown that the chelated organic forms of selenium, chromium, and iron are more available than inorganic forms. With other minerals, such as zinc and copper, studies have indicated there is a similar availability with both the chelated organic and inorganic forms. For some minerals, such as calcium and magnesium, the absorption of the unbound elemental form of the mineral is so excellent, chelation is not necessary.

It is important to note that the availability of minerals is also influenced by other factors, such as excesses of other minerals in the diet, and the amounts of fiber and certain other substances present.

For now, when trying to determine which pet food has better mineral sources, it may be wise to be to make sure that if a pet food contains added zinc, chromium, or iron, at least some of it is in chelated form. For the other minerals, both forms may be helpful, but if these minerals are not chelated, it does not necessarily mean they will not be absorbed. Watch for more information on chelated minerals from reputable sources. Meanwhile, choose a premium food that meets AAFCO Nutrient Profiles and contains high-quality ingredients, to help ensure that your pet gets a balanced, broad range of essential vitamins and minerals and stays in excellent health.

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