Sodium & Chloride Requirements

Drs. Foster & Smith Educational Staff

Sodium and chloride are often thought of as a pair. Sodium chloride is basic table salt.
Function of sodium and chloride

Sodium and chloride help maintain the balance between fluids inside and outside individual cells of the body. Sodium aids in the transfer of nutrients to cells and the removal of waste products. Chloride helps maintain the proper acid/alkali balance in the body. Chloride is also necessary for the production of hydrochloric acid (HCl) in the stomach which helps in the digestion of protein.

Dietary sources of sodium chloride

Sodium and chloride are found in almost all foods. Salt is added to many pet foods, and as we know, can increase the flavor of foods. Sodium and chloride may also be bound to minerals or molecules such as Vitamin K or Potassium (K).

Daily sodium and chloride requirements

In general, the chloride requirement is 1.5 times the sodium requirement. This is because most of the sodium and chloride come from salt, and by weight, salt provides 1.5 times more chloride than sodium. Adult dog foods should contain at least 0.06% sodium and 0.09% chloride (on a dry matter basis). Puppy foods should contain 5 times that much. Kitten and cat foods should contain at least 0.2% sodium and 0.3% chloride (on a dry matter basis). Most pet foods contain levels much higher than these minimum daily requirements.

Sodium and chloride deficiency

A dietary deficiency of sodium and chloride would be extremely rare because most pets today are fed commercial pet foods. A sodium or chloride deficiency is more likely to occur because of an excess loss of these two minerals from the body. This can result from prolonged (or chronic) severe diarrhea and/or vomiting. This can be a very serious condition and animals with prolonged vomiting or diarrhea should be seen by a veterinarian.

Sodium and chloride toxicity

Sodium and chloride toxicity generally does not occur in normal animals with access to good quality drinking water. Any excess intake of sodium or chloride is filtered through the kidneys and excreted into the urine. If good drinking water is not provided, however, the concentrations of sodium and chloride can become too high. Signs of sodium chloride toxicity include seizures, blindness, dehydration, loss of appetite, and death within 24 hours.

*Unauthorized use of any images, thumbnails, illustrations, descriptions, article content, or registered trademarks of **Foster & Smith, Inc.** is strictly prohibited under copyright law. Site content, including photography, descriptions, pricing, promotions, and availability are subject to change without notice. These restrictions are necessary in order to protect not only our copyrighted intellectual property, but also the health of pets, since articles or images that are altered or edited after download could result in misinformation that may harm companion animals, aquatic life, or native species.*