

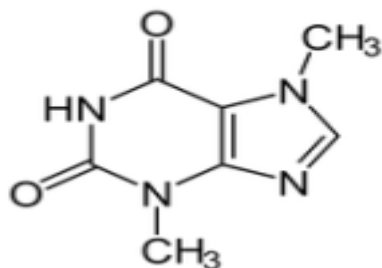
Read the article and complete the text with the words / phrases from the box below:

after beans dark known lethal muscles poisoning scale similar species treatment urine

THEOBROMINE CHEMISTRY

Adapted from <http://chemistry.about.com/od/factsstructures/a/theobromine-chemistry.htm>

By Anne Marie Helmenstine, Ph.D.,



This is the two-dimensional molecular structure of theobromine, a naturally-occurring alkaloid that is to caffeine. Theobromine is also known as xantheose.

Theobromine belongs to a class of alkaloid molecules as methylxanthines. Methylxanthines naturally occur in as many as sixty different plant and include caffeine (the primary methylxanthine in coffee) and theophylline (the primary methylxanthine in tea). Theobromine is the primary methylxanthine found in products of the cocoa tree (...).

Theobromine affects humans similarly to caffeine, but on a much smaller Theobromine is mildly diuretic (increasesproduction), is a mild stimulant, and relaxes the smoothof the bronchi in the lungs. In the human body, theobromine levels are halved between 6-10 hoursconsumption.

Theobromine has been used as a drug for its diuretic effect, particularly in cases where cardiac failure has resulted in an accumulation of body fluid.(...).

Cocoa and chocolate products may be toxic orto dogs and other domestic animals such as horses because these animals metabolize theobromine more slowly than humans. The heart, central nervous system, and kidneys are affected. Early signs of theobrominein dogs include nausea and vomiting, restlessness, diarrhea, muscle tremors, and increased urination or incontinence. Theat this stage is to induce vomiting. (...)

Different types of chocolate contain different amounts of theobromine. In general, theobromine levels are higher inchocolates (approximately 10 g/kg) than in milk chocolates (1-5 g/kg). Higher quality chocolate tends to contain more theobromine than lower quality chocolate. Cocoanaturally contain approximately 300-1200 mg/ounce theobromine (note how variable this is!).