

**TABLE I**  
**Methylxanthine Concentrations in**  
**Different Forms of Chocolate<sup>1,2</sup>**

<i>Source</i>	<i>Caffeine</i>	<i>Theobromine</i>
White chocolate (1 oz)	0.85 mg	0.2 mg
Milk chocolate (1 oz)	6 mg	44–56 mg
Semisweet chocolate (1 oz)	22 mg	238 mg
Baking chocolate (1 oz)	35–47 mg	393 mg
Cocoa <sup>a</sup>	5–42 mg/oz	130–737 mg/oz
Coffee beans <sup>a</sup>	1%–2%	Not available

<sup>a</sup>Methylxanthine levels in these sources can vary depending on environmental/growth conditions and the type of bean.

## Nutella and dogs

A jar of Nutella contains 13 ounces.

Nutella is 7.5% 'as fed' cocoa solids / powder

What are cocoa solids? "Dry cocoa solids are the components of cocoa beans remaining after cocoa butter, the fat component, is extracted from chocolate liquor, roasted cocoa beans that have been ground into a liquid state. Cocoa butter is 50% to 57% of the weight of cocoa beans and gives chocolate its characteristic melting properties. Cocoa powder is the powdered form of the solids sold as an end product."

If your dog ate 13 ounces of Nutella it would get 1 ounce of cocoa powder.

100mg/kg = LD100 of methylxanthine (theobromine) or 45mg/lb

50% odds of killing a dog with methylxanthine: 25mg/lb

10mg/lb = Toxicity without killing anyone.

The total methylxanthine concentration of dry cocoa powder is 200 - 800 mg/oz but figure the worst. It varies widely! Assume 800mg/oz

So if 13 ounces of Nutella contains 1 ounce of cocoa powder – then thirteen ounces of Nutella contains 800mg of methylxanthine (theobromine)

If it only takes 100mg of methylxanthine to non-fatally impact a 10 pound dog, then the dog would be visibly and clinically intoxicated by 1.6 ounces of Nutella. (3.2 tablespoons) However, it would take about 7 tablespoons to have a fifty percent chance to fatally impact a ten pound dog.

A whole jar of Nutella (13 ounces) could visibly intoxicate but non-fatally impact an 80 pound dog. Nutella can not be considered "safe" for dogs.

However, giving a 10 pound dog a **teaspoon** of Nutella as part of a THC delivery system would not be tacitly *harmful* under any circumstances of age or stamina. Signs of agitation would be possible. Use Nutella at your own, considerable risk.