

## Origin of the name: *Clostridium botulinum*

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On December 14, 1895 in the small town of Ellezellesin, Belgium, 34 musicians of a local band had a meal at the inn after playing at a funeral. Following the meal, the musicians experienced visual disturbances (ptosis, diplopia, and mydriasis), generalized weakness, dysphagia, shortness of breath, and difficulty speaking. A few also experienced urinary retention and constipation. Three young musicians died over 7 days. Food poisoning was suspected, probably from a ham served at the inn.

The suspected ham and a second ham from the same pig not eaten by the patients, and organs from the dead victims were sent to Emile-Pierre-Marie Van Ermengem (1851-1932), a professor of microbiology and a physician at Ghent. Van Ermengem performed a clinical, toxicological, and bacteriologic investigation into the effects.

The pig had been slaughtered four months previously, and cut into two hams. The ham eaten at the inn showed no microscopic signs of decay but bacteria were seen. The second ham, which did not cause illness, showed signs of decay, but no signs of the bacteria. The amount of meat consumed correlated with the severity of symptoms. The patients who died or were very ill had all eaten at least 200 grams, as compared to the 60 to 70 grams eaten by those who quickly recovered.

Tiny fragments of the ham were injected into cats, pigeons, monkeys, guinea pigs, rabbits, and mice; all showed symptoms that were comparable to those of the human victims. Feeding the ham led to similar symptoms in monkeys, guinea pigs, and mice, but not in cats, dogs, or chickens.

Anaerobic bacteria were isolated from the ham and the organs of the victims. A likely scenario was that the ham was infected with the bacteria during slaughter or preservation and immersion in the brine failed to prevent infection by this bacterium and

its toxin. Van Ermengem named the bacterium *Bacillus botulinum* from the Latin word botulus, meaning sausage, because the symptoms observed were similar to those of a syndrome known primarily in southern Germany, which occurred after eating a type of sausage.

*Bacillus botulinum* was later placed in the genus *Clostridium* (from Greek *kloster* meaning spindle), while some debate still existed over the basis for the species name. In 1997 Aronson agreed that the name was derived from the Latin word botulus meaning sausage and stomach, but that the bacterium “is so called because it looks sausage shaped, not because it gets into the sausages or affects the stomach (Aronson, 1997).” Torrens contradicted Aronson by claiming the name was indeed linked to sausage consumption. He cited the work of Justinus Kerner, who linked “sausage poisoning” or botulism to a paralytic illness resulting from consumption of sausage.

## REFERENCES

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