Infant Botulism

The Issue

Infant botulism is a rare disease that can affect otherwise healthy children who are less than a year old. The only food that has been linked to infant botulism in Canada is honey, so Health Canada is advising parents and caregivers not to feed honey to infants.

Background

Infant botulism is caused by a food poisoning bacterium called Clostridium botulinum. When an infant swallows spores of this bacterium, the spores grow and produce a poison in the baby’s intestine.

It is easy for infants to come into contact with this bacterium, because it is quite common in soil and dust. The spores have also been found in samples of honey, which is the only food source that has been linked to actual cases of infant botulism.

Cases of infant botulism in children over the age of one are possible, but very rare. With time, children develop helpful bacteria in their intestines. These helpful bacteria, which are well-established in most children by the time they turn one, act as a defence against the harmful spores that can cause infant botulism.

In Canada, there were only 26 reported cases of infant botulism between 1979 and the end of 2006. In the United States, about 70 to 90 cases of infant botulism are reported every year. It is quite possible that there have been additional cases in both countries that were misdiagnosed, and therefore not reported.

Symptoms of Infant Botulism

The earliest and most common symptom of infant botulism is constipation. Other symptoms include general weakness, a weak cry, a poor sucking reflex, irritability, lack of facial expression, and loss of head control. In some cases, the child may have trouble breathing due to paralysis of the diaphragm.

Treatment

Most babies with infant botulism have to go the hospital for a few days, or even a few weeks. During treatment, doctors pay close attention to their nutritional needs, and make sure they are able to breathe properly. The babies usually do not need antibiotics and most make a complete recovery.

Until recently, antitoxins were not considered to be an appropriate treatment for babies. However, there is a fairly new antitoxin treatment for infant botulism called BabyBIG®. This treatment is available in the U.S., and in some situations, it can be made available to Canadian infants through Health Canada’s Special Access Programme. (See the Need More Info? section below for links to additional details about this.)
Honey and Infant Botulism

Most honey produced in Canada is not contaminated with the bacteria that can cause infant botulism. Random sampling shows that less than 5% of the honey produced here contains the bacterial spores. When the spores are found in honey, the numbers are usually low. However, even a small number of spores can cause infant botulism in a baby.

This risk is present in both pasteurized and non-pasteurized honey. The process of pasteurizing honey prolongs the shelf-life of the product, but the temperatures used are not high enough to kill the spores that cause infant botulism.

Minimizing Your Risk

Parents and caregivers should not give honey to infants who are less than one year old. Even though most honey produced in Canada is not contaminated with the bacteria that can cause infant botulism, you are better off playing it safe.

You should never add honey to baby food, or use honey on a soother. If you are looking for a way to quiet a fussy or colicky baby, ask your doctor about some alternative methods.

Contact your doctor if your baby shows any of these symptoms:

• is too weak to cry or suck as usual
• does not have bowel movements and has weak muscles
• has a wobbly head because the neck is weak
• has weak arms and legs
• is not able to swallow

Health Canada’s Role

Health Canada’s Food Program works with governments, industry and consumers to establish policies, regulations and standards related to the safety and nutritional quality of all food sold in Canada. As part of this work, Health Canada’s Botulism Reference Service helps investigate suspected outbreaks of botulism in Canada. It also maintains a supply of antitoxin, and analyzes bacterial spores and toxins found in clinical and food samples from across the country.

Need More Info?

Contact:
Botulism Reference Service
Health Canada, Research Division
251 Sir Frederick Banting Driveway,
Tunney’s Pasture
Ottawa, ON K1A 0K9

Also, see:
Botulism Reference Service of Canada, at:

For information about the BabyBIG® treatment for infant botulism, go to: www.infantbotulism.org/ and click on the General Info tab near the top of the page.

For details about Health Canada’s Special Access Programme, visit: www.hc-sc.gc.ca/dhp-mps/acces/drugs-drogues/index_e.html

For general information about botulism, see:
Canadian Food Inspection Agency - Food Safety Facts on Botulism (Clostridium botulinum) at:

Centers for Disease Control and Prevention (U.S.) - Botulism, at:
www.cdc.gov/nczved/dbmd/disease_listing/botulism_gi.html

For general tips on food safety, see:
Health Canada Food Safety, at:
www.hc-sc.gc.ca/fn-an/securit/index_e.html

The Canadian Partnership for Consumer Food Safety Education, at:
www.canfightbac.org/cpcfse/en/

For additional articles on health and safety issues, go to the It’s Your Health Web site at:
www.hc-sc.gc.ca/iyh-vsv/index_e.html. You can also call toll free at 1-866-225-0709 or TTY at 1-800-267-1245*