



Beware of botulism in flavored-oil products

Many of us will share the holidays by giving gifts of homemade foods. But before you start getting too creative in the kitchen, make sure your gifts will be safe to eat.

Most sweets, as well as acidic foods such as flavored vinegars, are safe as they are unlikely to support the growth of dangerous microorganisms. More savory foods, however, can be risky. Most people know that vegetables and meats must be canned carefully to avoid growth of an extremely toxic microorganism called *Clostridium botulinum*. Even if you have diligently washed your hands, cutting board and knives, the spores of *Clostridium botulinum* can remain in your raw materials. If the spores are not destroyed by high heat, the organism will grow in an oxygen-free environment such as a sealed can or bottle, producing an extremely potent and potentially deadly paralytic nerve toxin.

The condition that results is botulism. Symptoms include double or blurred vision, dry mouth, slurred speech and difficulty swallowing. Muscle weakness and respiratory failure can also occur. Symptoms generally begin 18 to 36 hours after eating a con-

taminated food, but can occur as early as six hours or as late as 10 days, making it difficult to identify the specific food cause.

These spores can lie dormant until they find themselves in a low-acid food stored with little or no oxygen present, as in some of today's popular herb- and garlic-flavored oils. The oil surrounding the particles of herb or garlic create an oxygen-free environment that supports growth of the spores.

Unsafe recipes for these types of oils can be found in some popular cookbooks and making them is like playing Russian roulette. You may get away with it, but the risk is great.

The majority of botulism outbreaks in the United States are from foods processed at home. The Centers for Disease Control reported that fewer than 7 percent of food-borne botulism cases between 1950 and 1996 were from commercially processed foods. This is primarily due to regulations that require such oil-based vegetable products transported over state lines to follow strict manufacturing guidelines, including adding citric or phosphoric acid to increase acidity and heating risky foods at high temperatures under pressure.

Unfortunately, methods to acidify garlic at home are not easy nor reliable. Vinegar, for example, can take as much as a week to penetrate the garlic enough to reach a safe pH level.

Many foods preserved in oil, such as garlic, herbs, chile peppers and tomatoes are particularly prone to botulism due to their physical and chemical nature. Even when these foods are prepared properly, they should be stored in the refrigerator after opening and then used within a few months.

How can you tell if a flavored oil is safe? If it is commercially bottled, it should have been processed under heat and pressure. The label should indicate the oil must be refrigerated once opened.

If a product is homemade, ask when it was made. If it was bottled just a day or two earlier, refrigerate it immediately and use within a few weeks. Don't buy it if the product is older than that.

The potent toxin that causes botulism is destroyed by boiling for at least 20 minutes. But the safest approach when in doubt is to dispose of the food.

Right about now, Grandma's favorite cookie recipe sounds better than ever. It makes a safe food gift that's sure to please.

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