

ARE PAWPAWS SAFE ?

"Due to its potential for allergic reaction causing contact dermatitis and possible presence of pesticides, pawpaw consumption may be harmful to humans."

[wikipedia.org/wiki/Asimina_triloba#Fruits]

Because of that statement, a question has arisen about the safety of eating pawpaws. According to the FDA,



"The pawpaw has a long history of food use and the FDA does not currently have any evidence that pawpaw is unsafe to eat."

[communication to Dr. Kirk Pomper, Kentucky State University.]

Indeed, some people are allergic to pawpaw. This is not exceptional, however. Food allergies are many, the most common being

milk, eggs, fish, shellfish, tree nuts, peanuts, wheat, and soybeans. Among fruits the common ones are *apple, peach and kiwi fruit.* Less common are *apricot, banana, cherry, coconut, date, fig, grape, lychee, mango, melon, orange, peach, pear, persimmon, pineapple, pomegranate, prune, strawberry, and tomato.*

This list puts pawpaw allergy in perspective. Pawpaws are not unusual; and the same caution should be exercised in eating them as in eating other fruits.

The statement that pesticides are present in pawpaw seems peculiar. Pesticides are not being sprayed on the fruit — never in the wild, and almost never in cultivation. This claim seems to be a poorly chosen wording, based on the fact, that pawpaw — and other plants in the Annona family — contain acetogenins, a class of potent compounds that have pesticidal properties.

Because of acetogenin's potent bioactive properties, they are being investigated for their anti-cancer potential. Other research is investigating the neurotoxicity, using rat subjected to intravenous injection of purified acetogenins. The toxicity is expressed at higher doses than humans would ingest. The practical implication is unknown since realistic studies in which the pawpaw fruit is ingested have not been done. What is the absorption in the stomach and intestine? How much of the compound is detoxified by the liver? How quickly is it excreted?

We should not be surprised that plants contain toxic compounds. They are the plant's defense against predation by insects, fungi, and animals. The food plants eaten around the world are full of bioactive compounds. A short list of the notable toxic compounds and their plant are these:

Cholinesterase inhibitors - in potatoes, tomatoes, and eggplant.

Protease inhibitors – in raw soybeans

Amylase inhibitors – in wheat flour

Tannins – in tea, coffee, and cocoa

Cyanogenic glycosides – in cassava

Glucosinolates – in cabbage, broccoli, Brussel sprouts, etc

Lectin proteins – in red kidney beans

Lathyragens – in chick peas and vetch

Convicine and vicine – in fava beans

Moderation in eating pawpaw is the sensible approach. Consumption of one or two fresh fruits a day, in season, is normal; it is how humans have consumed them throughout the ages, and can do no harm. Daily consumption throughout the year, particularly of a tea brewed from the leaves, is probably unwise. Finally, and most importantly, do not inject pawpaw fruit directly into your veins.