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Memorial Sloan Kettering
Cancer Center

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What is it?

Pawpaw is toxic to some cancer cells, but such effects have not been shown in humans.

Asimina triloba, commonly known as pawpaw, is native to North America and has edible bean-shaped fruits. The plant extract is used in anti-lice shampoo and in pesticides.

The major components of pawpaw are compounds known as acetogenins. They prevent the cell from making ATP, an important energy source. In lab studies, the extract killed cancer cells resistant to commonly used chemotherapy drugs such as adriamycin. It also appeared to be more toxic to cancer cells than to normal cells. However, studies on these effects have not been conducted in humans.

What are the potential uses and benefits?

- To treat lice

Pawpaw extract has been shown to be effective as an anti-lice shampoo.

- Cancer treatment

Test tube studies suggest pawpaw may have activity against cancer cells, but experiments in mice produced conflicting results. There are no published clinical studies in humans that test safety or effectiveness of pawpaw as a cancer treatment.

What are the side effects?

- Allergic reactions
- Nerve toxicity
- Vomiting

Case report

Neurodegenerative disease: In an 80-year-old white man who complained of effortful speech and mild balance impairment, possibly related to long-term consumption of pawpaw fruit.

What else do I need to know?

Patient Warnings:

Pawpaw fruit contains high concentrations of annonacin, which is toxic to nerve cells. In addition there have been case reports of possibly related nerve toxicity. Therefore, chronic use should be avoided.

Do Not Take if:

- You are pregnant.

Special Point:

- There are several Web sites that promote pawpaw as an effective treatment for cancer. However, there is very little scientific evidence to support such claims.
- Pawpaw should not be confused with [graviola](#), also known as Brazilian pawpaw, or with papaya, another fruit with a similar texture and appearance.

If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

American pawpaw - Last updated on February 19, 2021

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