

## PAPAYA LEAF: Scientific name: Carica papaya



Traditional African, S.E. Asian, and Australian Aborigial herbal remedies include the use of papaya leaves. In the 1960's and 1970's, a hot-water extract of papaya leaves emerged as a popular cure of cancer in Australia supported by case studies and anecdotal evidence. Due to lack of scientific validation, this died down.

Recent research such as the University of Florida studies in 2010, published in the *Journal of Ethnopharmacology* (February 17, 2020 edition) documented that extract from freeze-dried papaya leaves boosts production of Th1-type cytokines which are key signaling

molecules that regulate the immune system. Additionally, the reports recorded papaya leaves' direct anti-tumor effect on a broad range of lab-grown human tumors including cancers of the cervix, breast, liver, lung, and pancreas.

Dr. Nam Dang, professor of medicine and medical director of the UF Shands Cancer Center Clinical Trials Office has stated that "Based on what I have seen and heard in a clinical setting, nobody who takes this (papaya leaf) extract experiences demonstrable toxicity. It seems like you could take it for a long time- as long as it is effective." There is no indication of damage to normal cells, avoiding the common and devastating consequences of other therapy regimes.

Ten different types of common human cancer cell cultures exposed to papaya leaf extract showed slowing of the growth of tumors within twenty-four hours. The research team focused on a cell line for T lymphoma and results suggested that one of the mechanisms employed by the papaya leaves is inducing cell death (apoptosis).

The strong digestive enzymes found in papaya leaves may digest the protective fibrous protein coating that protects cancer cells from recognition and attack by the immune system.

Papaya contains acetogenins - active compounds that modulate the production of ATP in mitochondria of specific cells - which affects the viability of specific cells and their ability to read natural markers in these synthetic substances, identify them as foreign invaders and defend against them.

A recent clinical study with over 100 participants showed that the papaya extract, containing a mixture of acetogenins, supports the body's normal cells during times of cellular stress.

**Anti-parasitic:** Acetogenins found in papaya leaves have been shown to have dramatic biological activity, being active against worms, some viruses, fungi, and many cancer cell lines. When compared with conventional chemotherapy agents, they have worked comparably in cell culture and animal studies, but at far lower concentrations and with almost no toxicity to host animals.

The idea that enzymes help, not only in digestion, but also can be therapeutic for a wide spectrum of health problems is not new, and modern medicine has proven in clinical studies that enzymes such as papain (abundant in papaya) taken orally are therapeutic.

**Digestive System:** Additional therapeutic effects of papaya leaves include relief of indigestion, acid reflux and heartburn by digesting potentially toxic waste, killing H. pylori bacteria that cause inflammation and indigestion, and break down protein and carbohydrates to soothe the GI tract and bowels.

Anti-tumor / Anti-cancer: Scientific studies have shown papaya leaves helpful in combating the development of harmful tumors and cancer cells. Studies and the University of Florida (2010) showed that 10 human cancers including breast, lung, liver, and pancreatic cancers exposed to papaya leaf showed moderate development, the larger the dose, the more substantial the effect. One possible explanation of this effect may be the fact that many cancer cells have a fibrous protein coating that protects them from being attacked by your immune system. The strong digestive enzymes in papaya leaves may digest this protective coating making the tumor and cancer cells open to attack by your immune system. It may be a stretch to suggest that papaya leaves cure cancer, but if it is not a "cure" it does seem to decrease cancer development without negative side effects.

**Dengue Fever:** Papaya leaves have gained popularity to fight colds, flues, and relieve the high fever and painful symptoms associated with dengue fever. The substantial levels of strong digestive enzymes (papain and chymopapain) help to balance and support blood platelets with the effect of combating dengue.

**Anti-Aging:** Papaya leaf contains over 50 amino acids such as (theronin, glutamic acid, glycine, leucine etc.) some of which are used in cosmetics for creating young, healthy skin and as anti –aging compounds.

**Immune booster:** Powerful antioxidants and tannins in addition to TH1 cytokines found in papaya leaf boost the immune system. Th-1 sort cytokines are hormonal messengers regulating the immune system. Papaya leaf fortifies the generation of TH2 cytokines booting your immune system.

**Circulatory system support:** One cause of erectile dysfunction is restricted blood flow to the extremities. One cause of restricted blood flow is excess fibrin in the blood which "traps" red blood cells preventing them from entering the capillaries and getting into the bloodstream. Papaya leaf is a natural proteolytic. Papain and chymopapain along with other natural components allow your body to dissolve the fibrin thereby increasing blood flow and the delivery of oxygen and nutrients

to reach your cells. Adequate oxygenation and nutrition at the cellular level may have an effect on erectile dysfunction as well as heart disease, neurodegenerative diseases, cancer and other serious health challenges.

**Nutrition:** Nutrients such as B-Vitamins, Vitamin A and C and flavonoids (powerful antioxidants), calcium and Vitamin D (strong bones), Vitamin E (supports sexual and cardiovascular health) are all contained in Papaya leaves.

**CELLULAR FRACTION-LINE TECHNOLOGY (CFL):** Enzymes such as the strong digestive enzymes in papaya leaves are thermo—sensitive - easily denatured by exposure to heat. The absence of exposure to heat is a key to maintaining the potency of papaya leaves. Preservation of the cellular and molecular structure achieved by CFL provides higher efficacy.

## **DISCLAIMER:**

This brief is solely intended as a source of information and does not prescribe or advise the use of any substance mentioned herein. The authors do not intend to diagnose, cure, treat, or prevent any disease. The Food and Drug Administration of Thailand has not evaluated any statements made herein.

Consult with your doctor about all prescription and non-prescription medicines you take before you begin to use any herbal products and partner with your professional health care practitioner on determining your own health destiny.

If you are pregnant, considering pregnancy or are a nursing mother you should not use papaya leaf.

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