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PAPAYA LEAFE EXTRACT FOR REGENERATION OF PLATELET IN BLOOD

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ABSTRACT

Papaya (Carica papaya Linn) is well known for its exceptional nutritive and medicinal parcels throughout the world. From ancient times, the Papaya and its components such as leaves, seeds and roots are being used for medicinal purposes. This delicious fruit of Papaya is popular among family members of all periods for the succulent dishes deduced from it. There are various which you can even say a lot of benefits of papaya are owed due to the high content of Vitamins A, B, and C, proteolytic enzymes such as papain and chymopapain which have antiviral, antifungal, and antibacterial parcels. Carica papaya can be used for the treatment of multitudinous conditions like knobs, sludge, sinuses, eczema, cutaneous outgrowths, glandular excrescences, blood pressure, dyspepsia, constipation, amenorrhoea, general fragility, expel worms, and vitalizing reproductive organs apart from these there are much more benefits as a result, Carica papaya can be regarded as a Neutraceutical. In the present review composition, a humble attempt is made to show how this fruit is useful in the regeneration of blood platelets. This delicious fruit is for all age groups.

KEYWORDS:
Papaya, Papaya leaf, Carica papaya linn, Nuetraceutical, Papain, Chymopapain, and Platelets.

INTRODUCTION

So what's Papaya? It's a succulent and delightful fruit, belonging to the family Caricaceae is scientifically known as Carica papaya L. Papaya tree is grown in many various regions, including India, tropical America, and Europe. The papaya tree is generally a short-lived Indian tree. In historic times, it was considered an exotic fruit because of its buttery taste and appearance. Papaya was the first inherited modified fruit consumed by human beings for its nutritional and medicinal properties. So basically now in this composition, we will understand the medicinal effects of papaya, while one is suffering from Dengue and that person is low with blood platelets. In this situation how papaya leaf is helpful in regenerating the blood platelets (blood count). [2] [3]

What is Dengue: -Dengue is affecting a large area throughout the tropics and original spatial variation in dengue contagion transmission is explosively told by downfall, temperature, urbanization, and distribution of the top mosquito vector Aedes aegypti. Presently, aboriginal dengue contagion transmission is reported in the Eastern

Mediterranean, American, South-East Asian, Western Pacific, and African regions, whereas sporadic original transmission has been reported in Europe and the United States as the result of contagion preface to areas where Ae. Aegypti and Aedes albopictus, a secondary vector, do. The global burden of the complaint isn't well known, but its epidemiological patterns are intimidating for both mortal health and global frugality. Due to this dengue, many people face low blood count resulting in weak immunity and at this point in time, papaya leaf plays a key role. So now we will see the benefits of papaya. Images of Papaya and Papaya Leaf.

2) Boosting Immunity: – Papayas are brimming with nutrients, and the collective supremacy is the boost in immunity. The 200% of the recommended Vitamin C present is the main contributor in boosting the immune system, therefore, making your body thrive while fighting all types of infections and illnesses. [2]

3) What is Papain: – This enzyme is much the same as pepsin, a digestive catalyst in our body. [2]

4) What is Chymopapain: – A proteolytic enzyme from the latex of the papaya that is used medically in chemonucleolysis A drug made from chymopapain used to be very popular in treating slipped disks. Papain and chymopapain both help in lowering inflammation and improve healing from burns. [2]

Chemical combination present in Carica papaya fruits, seeds, peels, and leaves. Papaya fruits, seeds, peel, and leaves have nutraceutical values, which make them important in mortal diets. These papaya corridors are rich in macro-and micronutrients with varying degrees. For illustration, the seeds and leaves contain 16 – 32 protein, anyhow of the cultivars. The seeds contain a good quantum of lipid (21 – 30) and carbohydrates (8 – 58) in seeds and leafs making them good indispensable energy sources that may round the undernourished populations. [2]

Anti-thrombocytopenic and immunomodulatory conditioning:- Immune thrombocytopenic purpura (ITP) is a common hematologic complaint in which the vulnerable system act against platelets auto antigens and causes it to be below average, which can lead to internal hemorrhage. The standard number of platelets in the blood is between – platelets per micro-liter. The ITP can be the outgrowth of dropped thrombopoiesis in the bone gist, amplified platelets exploitation in the liver, or platelet insulation in the spleen. This condition is also the alternate current hematological problem in at least 10 pregnant women as the result of physiological changes and obstetric conditions similar to Low Platelet position pattern, hemolytic uraemic pattern, and amniotic embolism. It can also be started by infections performing from contagions similar to Dengue fever (DF), fungus, or bacteria. Dengue fever is an arthropod-borne flavivirus named dengue contagion (DENV) spread by Aedes aegypti as the vector in which 40 of the global population is at threat (90). Consuming medicines that have blood-thinning parcels similar to aspirin can also induce platelet aggregation in the blood tube. Although steroids are the first-line remedy for ITP, splenectomy is occasionally performed on cases as last resort to reduce platelet damage. The use of. papaya leaves excerpt has demonstrated to be an implicit volition for habitual ITP when given to 4 cases while staying for the alternate-line treatments. When ITP was convinced through the injection of a carboplatin medicine to Swiss albino mice, there was a substantial rise in platelet count among the group given the high attention of C. papaya leaves excerpt compared to low attention and the control (distilled water).

Images of Papaya and Papaya Leaf

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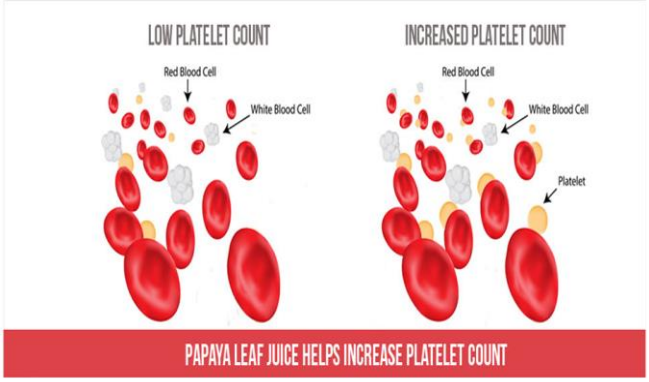
A clinical randomized controlled trial revealed a significant increase in the platelets number ($p<0.003$, $p<0.01$, $p<0.001$ of dengue viral-infected cases when C. papaya leaves juice was administered in discrepancy to the positive control when the remedy was completed. In another study conducted in vivo on mice, there was a remarkable rise in platelet number ($p = 0.00004$), reaching four times advanced on day 21 as to the comparison group. Also, the increasing conflation of thrombopoietin cytokines was observed, that is, a protein that regulates the product of platelets when molted mortal primary teeth were treated with immature C. papaya juice in vitro. Ranasinghe concluded that any composites that have a stabilizing effect on the tube membrane would be suitable to cover the platelets from destruction. Clinical inquiries are necessary to estimate the effect of PLE in habitual ITP and gestation-related thrombocytopenia. To minimize the number of cases taking splenectomy, further exploration on how shops like C. papaya can regulate platelet insulation in the spleen is demanded. Also, there's a need to identify the active composites and their implicit spots, i.e., to increase thrombopoiesis in the bone gist or reduce platelet insulation in the spleen for ITP cases.

How Papaya leaf acts as an elixir: – Carica papaya leaf contains different phytoconstituents like tannins, cardiac glycosides saponins, and alkaloids. The alkaloids like pseudocarpaine, carpaine, and dehydrocarpaine have shielding effects over or can say on the bone marrow. It helps in preventing the loss that occurred due to dengue and helps in building back the ability to produce the platelets. It helps in stopping the destruction of platelet loss in blood. Basically what the papaya leaf does is that it promotes the development of blood cellular components or hemopoiesis, Mainly the myeloblasts and megakaryocytes in the bone marrow. Papaya leaf contains a unique phytochemical called acetogenin, which is evinced to increase the platelet count. It's an effective remedy for people dealing with dengue as it ensures a speedy recovery. Papaya leaves also contain several natural factory composites similar to flavonoids and carotenes that contain anti-inflammatory and antioxidant parcels. They intercept the damage which is caused to the blood cells by the unfavorable free radicals. [1]



How to extract Papaya leaf juice and dosage: – Firstly wash the papaya leaves properly then boil them for at least 5 minutes then strain out the water, then we will take the washed papaya leaves and then we will ground them in a processor, blender or simply you can use a hand mortar with a small amount of water added into it. Check properly when it gets thick take the thick paste out in a sieve and squeeze out the juice from the paste in a bowl. Around 30 ml two times a day for an adult person and for the kids the dosage should be around 5 ml to 10 ml, before consuming the juice do consult with your doctor regarding the dosages. [1]

Extraction of Papaya leaf juice

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CONCLUSION

Well in any case you find the papaya juice not good for your taste buds, and then there are variants also available in form of pills. Which are prepared from the papaya leaf extract which also has the same effect as the papaya leaf juice. In any form, if one suffering from dengue consumes it will see the effects within a week, as it starts improving count in platelets.

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