Pineapple Bromelain

Bromelain is a complex mixture of proteinases found in pineapples. Bromelain has numerous medical uses, and also has many health benefits and beneficial therapeutic effects. It is a mixture of protein digesting enzymes called proteolytic enzymes. It has been proven to be anti-inflammatory, and have beneficial effects for treating arthritis and inflammatory bowel disease. [1] Bromelain is used for treating inflammation and swelling of the nose and sinuses. It can also be used to treat sports injuries, trauma, and other kinds of swelling. Bromelain is also used to treat digestive problems, sinusitis, and helps healing after surgeries. There are also studies that have found bromelain to have anti-cancer properties, and can also be used for reducing therapy induced side effects.

Bromelain was first isolated by a Venezuelan chemist in 1891 from pineapple. It was first introduced as a therapeutic supplement in 1957, and currently, it is one of the most widely used herbal medicines in Germany. Aside from its many health benefits, Bromelain is a popular ingredient used for meat tenderizing. Another popular meat tenderizer is Papain, which is derived from Papaya. The enzymes penetrates the meat and causes the meat to be tender when cooked.

Bromelain Enzyme and Cancer

There are a few research studies which suggest Bromelain may have anti-cancer properties. There are evidence that "Bromelain has the capacity to modulate key pathways that support malignancy. It is now possible to suggest that the anti-cancer activity of bromelain consists in the direct impact on cancer cells and their microenvironment, as well as in the modulation of immune, inflammatory and haemostatic systems". [2] Bromelain has pharmacological uses that includes interfering with the growth of malignant cells, and has therapeutic uses in modulating tumor growth. [3]

Bromelain and Digestion

Bromelain is marketed and sold as a digestive aid due to its ability to digest proteins. It is used to treat digestive disorders such as irritable bowel syndrome (IBS), bloating, and others. However, there are limited number of studies on bromelain and its effect on digestion. One study tested the effect of oral administration of Bromelain on inflammatory bowel disease (IBD). This study found that mice treated with bromelain had decreased incidence and severity of colitis (inflammation of the colon). [4]

Bromelain for treating Sinusitis

Bromelain is also used to treat sinusitis and help relieve the symptoms of Sinusitis. Studies have found that Bromelain can help speed up recovery from Sinusitis. A German

study involving 116 children under the age of 11 with sinusitis was conducted. The patients were treated with either Bromelain, standard therapy, or a combination of bromelain with standard therapy. The study found that children treated with Bromelain alone had the shortest period of sinusitis symptoms, while the bromelain and standard therapy combination had the longest period of symptoms. The study also mentioned that one patient with known pineapple allergy showed a mild allergic reaction to the treatment. No other side effects were reported. [5]

Bromelain Supplement for Treating Osteoarthritis

Bromelain is commonly used in arthritis supplements. However there are some conflicting studies on its effectiveness for treating osteoarthritis. One study done on the effects of bromelain as a treatment for osteoarthritis of the knee found that there were no statistically significant differences between the bromelain treated group and the placebo group. [6] However, another study of Bromelain and trypsin found that it can be considered a safe and effective treatment for osteoarthritis of the knee. [7]

Bromelain Side Effects

Bromelain side effects are not common. However, some side effects of bromelain include nausea, upset stomach, vomiting, indigestion, and increase in heart rate. Because bromelain comes from pineapples, individuals with pineapple allergy should not use bromelain. As mentioned in one of the studies above, a patient with known pineapple allergy had a mild allergic reaction. Bromelain may also increase bleeding, so individuals with bleeding disorders or using blood thinners should not use bromelain.

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