



Bromelain





Introduction

This presentation will assess Bromelain as one of the most preferred pharmacological agents in relation to traditional and alternative medicine.



A brief overview

Bromelain is a crude extract sourced from pineapples. The extracts contain concentrations of several components among them, various closely linked proteinases demonstrating, in vitro and in vivo, antiedematous, antiinflammatory, antithrombotic and fibrinolytic activities (Maurer, 2000: 1234).



Impact of Bromelain on body systems

Bromelain is categorized in the family of proteolytic enzymes that are often employed as drugs orally taken to systematically treat inflammatory malignant diseases related to blood-coagulation. In addition to plant cysteine-proteinases bromelain and papain, proteolytic enzymes can also be extracted for proteinases. In relation to its impact on body systems, these enzymes offer several therapeutic efficacies to the human body system.



Impact of Bromelain on body systems...cont

- Bromelain enzymes demonstrate,
- in vitro as well as in vivo activities
 - Antiedemateous activities
 - Antiinflammatory activities
 - Antithrombotic activities
 - Fibrinolytic activities.



Drug to drug interactions

It has been known for a number of years that Bromelain is capable of enhancing the tissue permeability of penicillins and tetracyclins after oral administration (Maurer, 2000: 1236). .



Evidence of latest research based findings

Antidiarrheal

Studies have also shown that when bromelain is used as a supplement it can derive the advantage of preventing diarrhea. The diarrhea often comes as a result of bacterial enterotoxins caused by *Vibrio cholerae* and *Escherichia coli*.



Evidence of latest research based findings

Clinical trials have used several preparations that either included bromelain alone or alternatively combined it with other nutraceutical ingredients such as trypsin and rutin.

Antibiotic Potentiation

Various studies have proved that bromelain can increase blood as well as urine levels of given antibiotics among humans (Maurer et al, 2000).



Research Based application

•**Cardiovascular and Circulatory Applications**

Bromelain has various cardiovascular uses. Some studies have indicated its effects on platelet aggregation as well as ischemia/reperfusion insults. Additionally, bromelain has been reported to be effective in the symptomatic containment of earlier mentioned thrombosis and angina pectoris. It reduces platelet aggregation and has been reported to be effective in thrombus formation (Metzig et al, 2000).



Complementary substitutes for Bromelain

One common substitute for Bromelain is tylenol . This drug is a brand name for the drug acetaminophen. It is an anti-inflammatory drug often employed by physicians to decrease the degree of pain in patients . This is achieved by reducing inflammation. In a significant majority of cases, pain among patients is often attributed to inflammation



conclusion

The presentation highlights the following major medical applications of bromelain :

- Inhibits formation of clot and reduces the rate at which plaques build in arteries.
- Increases permeability of tissues
- Useful enzyme in treating rheumatoid arthritis
- Plays a significant role in reducing joint inflammation
- Enhances healthy functioning of the heart
- speeds up the average healing time
- Improves gastrointestinal imbalances
- increases nutrient absorption from foods, probiotics as well as supplements



References

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