



PATIENT & CAREGIVER EDUCATION

Proteolytic enzymes

This information describes the common uses of Proteolytic enzymes, how it works, and its possible side effects.

Tell your healthcare providers about any dietary supplements you're taking, such as herbs, vitamins, minerals, and natural or home remedies. This will help them manage your care and keep you safe.

What is it?

Proteolytic enzymes have not been shown to prevent or treat cancer.

Proteolytic enzyme (PE) treatments were first used in Germany in the 1960s for inflammation, osteoarthritis, autoimmune diseases, and viral infections. The products usually contain a mixture of pancreatin, papain, [bromelain](#), trypsin, and chymotrypsin.

Lab studies suggest that PEs can affect the growth of cancer cells. Although PEs were previously reported to benefit patients with cancer, more recent studies do not support such claims. However, PEs may be useful in reducing pain associated with moderate-to-severe knee osteoarthritis.

What are the potential uses and benefits?

- **Inflammation**
Observational studies suggest benefit, but clinical data are lacking.
- **Autoimmune diseases**
Evidence is lacking to support this claim.

- **Viral infections**
Evidence is lacking to support this claim.
- **Cancer and treatment-related symptoms**
Data from clinical studies are conflicting.
- **Hepatitis C**
Evidence is lacking to support this claim.

What are the side effects?

- Gastrointestinal disturbance
- See also [Bromelain](#)

What else do I need to know?

Do Not Take if:

You are taking anticoagulants (warfarin): Bromelain may increase bleeding risk due to its antithrombotic effects observed in lab experiments ⁽¹⁷⁾, but clinical relevance is not known.

See additional [bromelain interactions](#).

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

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

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