

Ready to start planning your care? Call us at [800-525-2225](tel:800-525-2225) to make an appointment.

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Memorial Sloan Kettering
Cancer Center

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Superoxide dismutase supplements have not been shown to confer any health benefits.

Superoxide dismutase (SOD) is an enzyme found in all cells of the human body. It breaks down superoxide radicals, which are toxic to living cells and cause DNA mutations, into harmless components consisting of oxygen and hydrogen peroxide. The theory behind taking SOD as a supplement is that it will confer extra protection against cellular and DNA damage, but this does not hold true because SOD cannot be absorbed into the bloodstream when taken orally.

What are the potential uses and benefits?

- As an anti-aging supplement
There is no research to back this claim.
- To prevent bladder inflammation
A few studies support the use of superoxide dismutase *injections* to prevent cystitis. More research is needed. No studies support the use of oral superoxide dismutase supplements for this use.
- To reduce inflammation
This claim has no supporting research.
- To treat osteoarthritis
One clinical trial supports the use of superoxide dismutase injections into the knee for osteoarthritis, but more research is needed. The long-term effectiveness and safety of such injections is not known.
- To treat scleroderma
No scientific evidence supports this use.
- To treat urinary tract disorders
There are no data to back this claim.

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.

Superoxide Dismutase - Last updated on July 24, 2023

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