

COMPOUNDED SIROLIMUS: A PROMISING LIFE EXTENSION DRUG

What Is Sirolimus?

Sirolimus (commonly referred to as rapamycin) is a compound which was serendipitously discovered in naturally occurring soil sources on the island of Rapa Nui in 1972. Since its discovery, sirolimus has been used to regulate immune function, as an antifungal, and as an anti-inflammatory. More recently, low doses of sirolimus are being used to increase lifespan and longevity by improving cellular detoxification, energy, and overall quality of life.

How Does Sirolimus Work in the Body?

Sirolimus is an mTOR (mechanistic target of rapamycin) inhibitor which can help regulate the immune system and provide life-extending benefits. As indicated by the name, mTOR is the cellular target in the body where rapamycin binds. mTOR is important in regulating a wide range of functions in the body including autophagy (the process in which damaged cell components are cleared out and recycled), cell growth and proliferation, onset of age-related disease, and routine apoptosis (programmed cell death).

When nutrients are available to your body (after eating), mTOR turns on cellular metabolism,

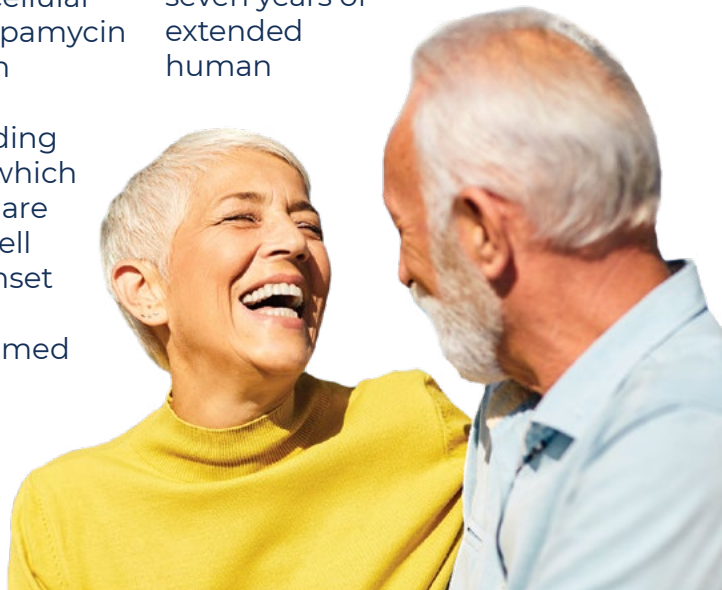
increasing cellular growth and proliferation. When nutrients are scarce (fasting or intermittent fasting), mTOR is inhibited, so cellular autophagy, repair, and regeneration can occur. Ideally, the mTOR pathway should be in balance between the growth and rest states, to maintain appropriate cellular turnover and repair.

The mTOR signaling pathway is a fundamental regulator of cancer cells, chronic inflammatory conditions such as arthritis, metabolism, insulin sensitivity, and cellular autophagy. Regular periods of autophagy are critical for health and longevity.

What Is Sirolimus Used For?

Low doses of compounded sirolimus taken intermittently are used to increase health span by improving cellular autophagy, mimicking intermittent fasting, increasing energy, reducing inflammation, and increasing lifespan.

Studies show that when mice were given rapamycin early in life, their life expectancy increased up to 60%. And when given late in life, rapamycin may increase lifespan by 9%–14%, which equates to roughly seven years of extended human



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Physicians Preference Pharmacy standards are more stringent than those of the United States Pharmacopeia (USP). In addition to onsite weight testing, we send multiple samples per week to an outside laboratory for potency testing. Physicians Preference Pharmacy ranks first in Houston for the number of samples sent for potency testing and in the top 8% of pharmacies nationwide.

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lifespan when treated with oral rapamycin (sirolimus). The Participatory Evaluation of Aging with Rapamycin for Longevity (PEARL) Study is an active trial further evaluating the safety and efficacy of rapamycin in humans and is anticipated to be completed in December 2023.

COMMON BENEFITS REPORTED BY OUR PATIENTS TAKING COMPOUNDED SIROLIMUS INCLUDE:

- Improved energy
- Decreased brain fog
- Improved mood
- Decreased inflammation and chronic pain (especially in the joints and back)
- Smoother, tighter skin
- Weight maintenance/loss
- Healthier and faster-growing fingernails and toenails
- Improved bowel function

SIROLIMUS MAY ALSO IMPROVE THE FOLLOWING CONDITIONS:

- Cancer
- Multiple sclerosis (MS)
- Painful menstrual periods
- Rheumatoid arthritis (RA)
- Ehlers-Danlos syndrome (EDS)
- Gastroparesis (delayed gastric emptying)
- Osteoporosis
- Periodontal disease
- Hearing loss
- Glaucoma

How Is Sirolimus Taken and How Long Does It Take to Work?

One 5 mg oral capsule of sirolimus taken once weekly is the generally recommended dose to achieve life extension and health span benefits. Your

healthcare provider may adjust your dosing to every 10 or 14 days and/or to a higher dose, based on your health status, response, improvements, and any potential side effects.

Most people have a noticeable increase in energy and a decrease in inflammation two or three days after their first dose. If you do not experience any noticeable benefits after three months of consistently taking sirolimus, your mTOR pathways may already be functioning optimally, so you may consider discontinuing sirolimus, if approved by your provider.

What Are the Side Effects and Safety Profile of Sirolimus?

When taken intermittently for life-extending purposes, sirolimus should not cause any side effects. One rare but potential side effect is aphthous ulcers (canker sores) on the inside of the mouth. If they do occur, these sores quickly resolve by increasing the number of days between sirolimus doses. Rinsing the mouth with saltwater is also helpful. Fewer than 1% of our patients have had canker sores related to sirolimus.

Since sirolimus is considered a life-extending compound, and the ability to inhibit mTOR seems to decline with age, it does not make much sense for individuals who are still growing or under the age of 25 years to use sirolimus for these purposes. In general, those over age 25 can benefit greatly from sirolimus. However, for younger patients suffering from more serious chronic conditions, the benefits of sirolimus treatment have been shown to greatly outweigh the risks.

Tracking Your Progress

A good way to evaluate your month over month improvements on compounded sirolimus is with a Medical Symptoms Questionnaire (MSQ). Your MSQ total score should decrease each month while taking sirolimus, indicating symptom improvement. Here is a link to the MSQ we recommend: <https://tinyurl.com/yp8fwvwn>

Who Can Benefit from Sirolimus?

Most adults can benefit from sirolimus because it inhibits the mTOR pathway. As described, mTOR inhibition and routine cellular autophagy are essential for increasing health span and life expectancy. Compounded sirolimus, when dosed intermittently at low doses, supports crucial cellular autophagy, also allowing the body to respond maximally to other treatments and therapies.

Sirolimus can be an excellent addition to your program for promoting optimal health and longevity. Our doctors who are prescribing it and patients who are using it have been beyond pleased with their responses to sirolimus. Talk to your healthcare provider about a prescription or call us to learn more about compounded sirolimus.

REFERENCES

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