Can Rapamycin Actually Improve Longevity? What Research Shows Transcript

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Rapamycin for Longevity Overview

If you're even slightly If you're even slightly interested in the field of interested in the field of longevity, you've longevity, you've probably heard of probably heard of rapamycin. And look, I think the mTOR science behind this this is basically sound.

is basically sound. What is not so What is not so reliable is the reliable is the evidence in humans. And evidence in humans. And depending on the history of depending on the history of your immune your immune system, this gap system, this gap either doesn't bother me at all either doesn't bother me at all or becomes a or becomes a complete hindrance.

complete hindrance. Today I will show you why I hold this why I hold this opinion and opinion and which of these two which of these two camps you may camps you may belong to. So, welcome belong to. So, welcome back to my back to my podcast. I am Dr.

podcast. I am Dr. Greg Jones, a naturopath Greg Jones, a naturopath and founder of and founder of Innovate Wellness Center Innovate Wellness Center here in Phoenix, here in Phoenix, Arizona. Here's a quick Arizona. Here's a quick warning.

warning. warning. Rapamycin is a Rapamycin is a prescription drug. This video is for. This video is for educational educational educational purposes only and is not purposes only and is not medical advice, and medical advice, and nothing herein is nothing herein is a recommendation for a recommendation for you you you to personally begin taking it. But to personally begin taking it. But here's something that might here's something that might make you stop for a moment make you stop for a moment. The same. The same drug that a transplant patient transplant patient takes to prevent the body from takes to prevent the body from rejecting the new rejecting the new kidney is the same kidney is the same drug that drug that biohackers biohackers biohackers use to use to try to live try to live longer. This drug is rapamycin, also rapamycin, also known by its known by its pharmaceutical pharmaceutical pharmaceutical name sirolimus, and name sirolimus, and for the rest of the video for the rest of the video I'll call it I'll call it rapamycin because that's the rapamycin because that's the name you'll name you'll see everywhere in the see everywhere in the longevity field.

longevity field.

The mTOR Mechanism Explained

It was originally It was originally developed as an developed as an immunosuppressant, immunosuppressant, immunosuppressant, specifically to specifically to protect a protect a transplanted transplanted transplanted organ from attack by the body's own immune system.

body's own immune system. So how did an anti- So how did an anti- transplant rejection drug become transplant rejection drug become one of the most one of the most talked-about longevity compounds we know of?

we know of? The answer lies in The answer lies in a switch inside a switch inside your body, your body, inside your inside your cells, cells, cells, called mTOR, which acts called mTOR, which acts as a master as a master growth controller. When growth controller. When mTOR is activated, your mTOR is activated, your cells are told to cells are told to grow and grow and divide. When mTOR divide. When mTOR is blocked, your is blocked, your cells go into cells go into another mode, a mode of another mode, a mode of cleansing and cleansing and repair, a process repair, a process called called called autophagy. And autophagy. And rapamycin blocks mTOR, rapamycin blocks mTOR, which is why which is why scientists are interested in scientists are interested in it beyond just as a it

beyond just as a transplant drug.

transplant drug. So imagine mTOR as a So imagine mTOR as a factory foreman factory foreman who never who never calls a repair calls a repair shift, always shift, always pushing the line pushing the line to produce more to produce more and more, never and more, never stopping for stopping for repairs. When you repairs.

Animal Lifespan Studies Reviewed

When you block block block this technician's signal, they this technician's signal, they finally call a finally call a repair crew. And repair crew. And this is a theory. So how does the data this is a theory. So how does the data actually actually actually support this? And support this? And here's the moment when the data here's the moment when the data really convinced really convinced me that the theory had a me that the theory had a strong strong strong basis, not just a basis, not just a plausible plausible plausible mechanism. In a mechanism. In a 2009 study, 2009 study, mice given mice given rapamycin starting at the equivalent of 60 equivalent of 60 years of age lived longer: years of age lived longer: 14% longer than females and 9% longer than males. And this was longer than males. And this was measured at a time measured at a time when 90% of the group had already when 90% of the group had already died. ??? ????? died. ??? ????? ????????????? ? ????????????? ? ????? ?????????? ????? ?????????? ????????????? ????????????? ????????????? ???????, ? ?? ? ????? ???????, ? ?? ? ????? ???????????, ? ???????????, ? ????????????? ????????????? ????????????? ????????? ????????? ????????? ???????????? ?????, ???????????? ?????, ?????????? ?????????? ?????????? ?????????? ??? ????, ?????????? ??? ????, ??? ????????? ??? ????????? ????????? ??????????, ???'????? ? ?????, ???'????? ? ????? ?????????? ?????. In a ?????????? ?????. In a follow-up follow-up follow-up dose- response study in 2014, response study in 2014, the results were further the results were further confirmed: at the confirmed: at the highest dose, highest dose, median median median lifespan increased by 23% in lifespan increased by 23% in males and 26% in females. And this is not just one. And this is not just one successful study successful study gathering dust in a gathering dust in a drawer in one drawer in one laboratory. It laboratory. It was reproduced at was reproduced at different sites and was different sites and was predictably predictably dose-dependent. And now dose-dependent. And now here's the part that here's the part that really caught really caught my attention. And sometimes the my attention. And sometimes the constant use of constant use of rapamycin rapamycin rapamycin skips this point altogether.

skips this point altogether. In a separate In a separate 2016 study, 2016 study, scientists tested scientists tested two different doses: a higher one two different doses: a higher one administered administered administered by injection and a lower one by injection and a lower one added to the added to the diet. At the higher diet. At the higher dose, male mice dose, male mice received an even greater received an even greater advantage in advantage in lifespan, but lifespan, but females received no females received no benefit. And, benefit.

The Sex Specific Dosing Problem

And, worse still, these females who received the higher who received the higher dose developed aggressive blood cancer more often than those who more often than those who were not treated. And at the were not treated. And at the lower dietary lower dietary dose, both males and females dose, both males and females lived longer, lived longer, without comparable without comparable spikes in that spikes in that aggressive cancer.

aggressive cancer. Let's just Let's just think about this for a moment. think about this for a moment. More of More of the drug didn't just the drug didn't just stop helping stop helping one sex, it one sex, it actively harmed it.

actively harmed it. And this single And this single study showed study showed me that it's not me that it's not just about increasing the just about increasing the dose of the compound. Anyone who dose of the compound. Anyone who views this views this differently is essentially differently is essentially ignoring the real data.

ignoring the real data. So, after So, after reading these animal studies, my animal studies, my skepticism about the skepticism about the biological basis has biological basis has almost disappeared. As almost disappeared. As for mice, the for mice, the issue issue issue is closed for me. I understand.

is closed for me. I understand. Choosing dietary Choosing dietary supplements can be supplements can be confusing. confusing. confusing. There are hundreds of There are hundreds of brands, conflicting brands, conflicting claims, and no claims, and no way to know what way to know what is actually beneficial is actually beneficial and what will really affect and what will really affect your health. That's why your health. That's why I created Dr. Jones' Supplement Store. Every Dr. Jones' Supplement Store. Every product in the store product in the store for energy, for energy, gut health, sleep, gut health, sleep, hormone optimization, recovery, and more is, recovery, and more is personally reviewed, tested, and, tested, and recommended. These are the recommended. These are the formulas that I formulas that I use myself and use myself and recommend to my recommend to my patients, friends, and patients, friends, and family. So, family. So, go to go to drjonesupplements.com, drjonesupplements.com, drjonesupplements.com, sign up for the sign up for the email newsletter, email newsletter, and you will receive a and you will receive a 10% discount on your first order. You will also receive. You will also receive exclusive exclusive exclusive protocols and insights protocols and insights that I share only that I share only with my community.

with my community.

Human Clinical Trial Data Gap

So let's cut through the So let's cut through the noise and choose noise and choose what really works. what really works. That's why the next That's why the next part of my part of my story story story upsets some people. Because upsets some people. Because as close as as close as I think the results of the I think the results of the mouse study are, mouse study are, the situation with humans is the situation with humans is not even close not even close. And this is where. And this is where my confidence my confidence drops, and I want to be drops, and I want to be honest about it, honest about it, instead of keeping instead of keeping quiet. There is quiet. There is only one real only one real randomized randomized randomized trial trial trial involving healthy involving healthy adults who do not adults who do not need need need a transplant, a transplant, called Pearl. It was called Pearl. It was published in published in 2025, and 114 people aged 2025, and 114 people aged 50 to 85 50 to 85 were followed were followed were followed for 48 weeks, for 48 weeks, comparing placebo with comparing placebo with low weekly low weekly doses of rapamycin.

doses of rapamycin. The results show that safety was similar across that safety was similar across groups, with women groups, with women on the higher dose on the higher dose seeing improvements in seeing improvements in muscle mass, muscle mass, reduced pain, and reduced pain, and no change in visceral fat no change in visceral fat. But here's the. But here's the part I want to part I want to delve into. This is where I delve into. This is where I mention biomarkers, and mention biomarkers, and it did not assess it did not assess mortality or mortality or life expectancy as an life expectancy as an endpoint. And there endpoint. And there is currently no is currently no trial of trial of rapamycin on rapamycin on lifespan in lifespan in humans. Now, to put it humans. Now, to put it simply, translating simply, translating these these these animal results into real animal results into real benefits for humans benefits for humans remains quite remains quite unclear. So unclear. So when I say there is no evidence for people, that's exactly what I mean no evidence for people, that's exactly what I mean. One short. One short trial of trial of trial of biomarkers in a biomarkers in a small group is small group is not the same as proof that not the same as proof that it extends a it extends a person's life. And this is a person's life. And this is a real gap. I'm real gap.

Who Should and Should Not Consider It

I'm not ignoring her. This is the whole not ignoring her. This is the whole reason why my reason why my verdict has two different verdict has two different answers depending answers depending on who asks.

on who asks. So, here's the breakdown So, here's the breakdown on security and why on security and why the answer depends the answer depends on who's asking on who's asking me the question. And that's the me the question. And that's the real basis of how real basis of how I think about I think about rapamycin. So rapamycin. So let me let me address address two different audiences directly, two different audiences directly, because you are probably one because you are probably one of them. If your of them. If your immune system is immune system is healthy, there is no healthy, there is no diagnosis of diagnosis of diagnosis of autoimmune autoimmune autoimmune disease, you are not disease, you are not taking taking taking immunosuppressants, and you do not

immunosuppressants, and you do not have a history of have a history of serious serious serious recurring infections, here is recurring infections, here is my position. I have no my position. I have no problem problem problem using using using rapamycin. It rapamycin. It passes the passes the safety threshold in the limited safety threshold in the limited human clinical trials that exist, and animal safety data, at the correct animal safety data, at the correct dose, are encouraging. And I'm dose, are encouraging. And I'm not telling you to go out and not telling you to go out and start start start taking it. I'm saying that taking it. I'm saying that if you and your doctor if you and your doctor decide to decide to explore this, the arguments explore this, the arguments about safety for a about safety for a healthy immune healthy immune system don't system don't scare me. Now, if scare me. Now, if you have an autoimmune you have an autoimmune disease, a disease, a history of history of immune system dysfunction, or immune system dysfunction, or frequently recurring frequently recurring serious illnesses, here is serious illnesses, here is my position. I wo my position. I wo n't n't n't go near that.

go near that. Rapamycin's original purpose Rapamycin's original purpose was to suppress the was to suppress the immune system immune system enough to enough to stop stop stop organ rejection, even at the low,, even at the low, intermittent doses intermittent doses used for used for longevity. So you're longevity. So you're still still still pushing an immune pushing an immune system that may system that may already be fighting back in the already be fighting back in the wrong wrong wrong direction. And this is my direction. And this is my division. These are two different division. These are two different answers for two answers for two different categories of different categories of people, and they are people, and they are based on the same based on the same evidence.

evidence. evidence.

Compounded vs Pharmaceutical Grade

Now another Now another practical thing. If practical thing. If you are in the healthy camp you are in the healthy camp and are really going to and are really going to discuss this with your discuss this with your doctor. Understand doctor. Understand that most people that most people who take who take rapamycin off- rapamycin off- label for label for longevity are not longevity are not getting the getting the getting the pharmaceutical version. You get a. You get a custom-made custom-made custom-made version from a version from a specialty specialty specialty pharmacy. A pharmacy. A 2025 study found that 2025 study found that custom-made custom-made custom-made rapamycin rapamycin rapamycin has significantly lower has significantly lower bioavailability than the bioavailability than the commercial commercial commercial pharmaceutical pharmaceutical pharmaceutical drug: drug: drug: approximately 31% is absorbed per approximately 31% is absorbed per milligram. This means milligram. This means that the dose on the label that the dose on the label and the dose your body actually receives can be your body actually receives can be significantly different. So, let's go back to where. So, let's go back to where we started. If you've heard. If you've heard rapamycin being touted as a rapamycin being touted as a proven "anti-aging pill" and wondered if the if the hype was justified, here's my hype was justified, here's my answer. From a answer. From a biological biological biological perspective, this may be perspective, this may be one of the most one of the most sound sound sound approaches in approaches in longevity medicine. Whether longevity medicine. Whether this is enough for this is enough for you depends you depends solely on your solely on your immune system. So immune system. So if this breakdown was if this breakdown was helpful, please like, subscribe for, subscribe for more more more research on research on hormones, peptides, and hormones, peptides, and longevity medicine, longevity medicine, and share this and share this video with anyone who video with anyone who might need it.

might need it. Thank you for watching. Thank you for watching. Dr. Greg Jones was with you Dr. Greg Jones was with you, see you in the, see you in the