40683 P5

BIOGEN
FOR THE RESULTS YOU WANT

RE I NU COLLAGEN FOR HIM

PROFESSIONAL INFORMATION

D 34.12 Multiple substance formulation. Health Supplement.

This unregistered medicine has not been evaluated by SAHPRA for its quality, safety or intended use.
Health supplements are intended only to complement health or supplement the diet.

SCHEDULING STATUS: S0

1. NAME OF THE MEDICINE
RE I NU COLLAGEN FOR HIM

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Composition:	**Per 10 g dosage:**	**%NRV***
Collagen peptides (Bovine)	7 000,00 mg	
Methylsulphonylmethane (MSM)	1 500,00 mg	
Ascorbic acid (Vitamin C)	500,00 mg	500 %
Co-Enzyme Q10	10,00 mg	
dl-alpha-tocopherol (Vitamin E)	15,00 mg α-TE	100 %
Zinc (as Zinc gluconate)	15,00 mg	136 %
Cholecalciferol (Vitamin D_3)	10,00 mg (1 000IU)	67 %
Lycopene	10,00 mg	
Selenium (as Selenium glycinate)	30 mg	55 %

*%Nutrient Reference Values (NRVs) for individuals 4 years and older (2010).

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM
Powder.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications
RE I NU COLLAGEN FOR HIM, supports cell strength and structure.

4.2 Posology and method of administration
Adults 18 years and older:
Take one dosage (10 g) of RE I NU COLLAGEN FOR HIM a day, or as recommended by your healthcare practitioner. For optimal results, take one 10 g dosage daily, add it to your favourite beverage (hot or cold), breakfast smoothie or bowl of oats. Mixing RE I NU COLLAGEN FOR HIM in cold water will cause the collagen to clump, to avoid this, mix with lukewarm water until dissolved, and top it off with cold water, stir and enjoy.

Elderly:
No specific studies have been performed in older patients, but according to clinical experience dosage adjustment is not required when treating otherwise healthy, older patients.

Patient with impaired renal and/or liver function:
In patients with impaired renal and/or liver function no dose recommendations can be given, since no studies have been performed (see also section 4.4).

Children and adolescents:
Not recommended in children and adolescents below the age of 18 years (see section 4.4).

4.3 Contraindications:
- If you have a hypersensitivity to Collagen, MSM, Vitamin C, Co-enzyme Q10, Vitamin E, Zinc, Vitamin D_3, Lycopene and Selenium or any of the excipients listed in 6.1.
- Contraindicated in patients with Hepatic disease and prostate cancer.
- Not recommended in patients that are taking blood coagulation supplements as this may increase the risk of spontaneous bleeding.
- Do not use this product if you have hypotension or liver deficiency.

4.4 Special warnings and precautions for use
Special care should be taken with RE I NU COLLAGEN FOR HIM.
If you are taking any prescribed medication, please check with your healthcare provider before taking this medicine.

Please take note of the following:
- Consult a healthcare provider prior to use if you are pregnant or breastfeeding.
- Not recommended for use in children under the age of 18 years.
- Not recommended in patients that are taking blood coagulation supplements as this may increase the risk of spontaneous bleeding.
- Consult a healthcare provider if symptoms persist or worsen.
- If you are taking medication for an enlarged prostate talk to your doctor before taking this product. It may not be suitable for you.
- Patients who suffer from chronic kidney disease; hyperoxaluria; kidney stones or who have a history of oxalate kidney stones.
- Patients who have diabetes mellitus should use caution due to possible interference caused by vitamin C with glucose determination.
- Large doses of vitamin E have been reported to increase bleeding tendency in vitamin-K deficient patients such as those taking oral anticoagulants. Patients with a bleeding disorder or those taking anticoagulants should use vitamin E supplements with caution.
- There is concern that high doses of vitamin E might increase the risk of poor outcomes in patients with cardiovascular disease and diabetes. Patients with diabetes or a history of myocardial infarction should avoid high doses of vitamin E.
- Patients with a history of head and neck cancer should avoid taking vitamin E supplements in doses of 400 IU daily or more, as there is some evidence that suggests that vitamin E might increase the risk of head and neck cancer recurrence.
- Patients undergoing an elective surgical procedure should be advised to discontinue use of REINU COLLAGEN FOR HIM at least 2 weeks prior to surgery, as vitamin E supplements might increase the risk of bleeding if used perioperatively.

Nutritional supplementation should not replace a balanced diet. Do not exceed the recommended dose without consulting a healthcare provider.

4.5 Interaction with other medicines and other forms of interactions
No specific drug interaction studies have been performed on RE I NU COLLAGEN FOR HIM, however, the pharmacokinetic properties Collagen, MSM, Vitamin C, Co-enzyme Q10, Vitamin E, Zinc, Vitamin D_3, Lycopene and Selenium have been summarized.

Interactions with Medicines
- Patients must consult a healthcare practitioner if they are taking any other medicine (including complementary or traditional medicines).
- Patients should consult a healthcare practitioner prior to use if they are using any of the following medication: warfarin; desferrioxamine; estrogens; fluphenazine; protease inhibitors; antibiotics; penicillamine.
- Coenzyme Q10 has antioxidant effects and this may reduce the activity of chemotherapy drugs that generate free radicals.
- Coenzyme Q10 might have additive effects with antihypertensive drugs.
- Coenzyme Q10 is chemically similar to menaquinone and might have vitamin K-like procoagulant effects, which could decrease the effects of warfarin. Zinc and Amiloride can modestly reduce zinc excretion and increase zinc levels, decrease cephalexin levels by chelating with cephalexin in the gut and preventing its absorption.
- Zinc might interfere with the therapeutic effects of cisplatin, and taking zinc along with integrase inhibitors might decrease the levels and clinical effects of these medicines.
- Zinc interferes with penicillamine absorption and activity. Zinc supplements reduce the efficacy of low-dose penicillamine (0.5-1 gram/day), but do not seem to affect higher doses (1-2.75 gram/day), provided dosing times are separated. Patients are advised to take zinc and penicillamine at least 2 hours apart.
- Quinolones form complexes with zinc in the gastrointestinal tract, reducing absorption of both the quinolone and zinc if taken at the same time. Patients are advised to take these drugs at least 2 hours before, or 4-6 hours after, zinc supplements.
- Vitamin E can increase the risk of bleeding when use concomitantly with anticoagulant/antiplatelet agents.
- Large doses of vitamin E might hinder the therapeutic effects of iron supplements in anaemia.
- Taking lycopene with anticoagulant or antiplatelet drugs might increase the risk of bleeding.

Interactions with Diseases / Impairments
- Patients are advised to discontinue RE I NU COLLAGEN FOR HIM at least 2 weeks before elective surgical procedures (see section 4.4).
- RE I NU COLLAGEN FOR HIM and use in Haemophiliacs and patients scheduled for surgery are advised to discontinue use at least 2 weeks before elective surgical procedures (see section 4.4).
- Low dietary zinc intake is associated with a greater chance of developing chronic kidney disease.
- Bariatric surgery reduces zinc absorption and can cause zinc insufficiency despite zinc supplementation.

Interactions with Foods
- Vitamins, minerals and nutrients obtained from other sources should be taken into account when prescribing / suggesting RE I NU COLLAGEN FOR HIM.

Fertility, pregnancy and lactation
- The safety and efficacy of RE I NU COLLAGEN FOR HIM in pregnancy and lactation has not been established.

4.6 Effects on ability to drive and use machines
Patients should exercise caution before driving or operating machinery until they are reasonably certain that RE I NU COLLAGEN FOR HIM does not affect their performance.

4.7 Undesirable effects
No clinical data are available on the effects of RE I NU COLLAGEN FOR HIM. Orally, Collagen, MSM, Vitamin C, Co-enzyme Q10, Vitamin E, Zinc, Vitamin D_3, Lycopene and Selenium is well-tolerated when used in recommended dosage instructions but may have side effects.

Summary of reactions

Immune system disorders:
Frequency unknown: MSM may increase allergy symptoms.

Psychiatric disorders:
Frequency unknown: Hypermania.

Nervous system disorders:
Frequency unknown: Fatigue, headache, insomnia, sleepiness, vertigo, tremors, agitation, dizziness, vivid dreams, anxiety, lethargy, neuropathy, paresthesia, disorientation, inability to concentrate.

Dermatologic:
Frequency unknown: Rash, itching, sweating, hives, flushing, edema.
Frequency rare: Skin sensitivity, eczema.

Cardiac disorders:
Frequency unknown: Chest pain, angina, flushing.

Pulmonary/Respiratory:
Frequency rare: Congestion.

Gastrointestinal disorders:
Frequency unknown: Nausea, vomiting, esophagitis, heartburn, abdominal cramps, gastrointestinal obstruction, diarrhea, increased salivation, bloating, flatulence, bowel symptoms, constipation, hunger, thirst, anorexia, blood in the stool, dry mouth, anorexia, dyspepsia, fever, indigestion, epigastric pain, gastrointestinal irritation, loss of appetite, gastric upset, intolerance to taste.

Renal and urinary disorders:
Frequency unknown: Increased urinary frequency.

Other:
Frequency unknown: Choline intake may cause a fishy body odor due to intestinal metabolism of choline to trimethylamine.

Description of selected adverse reactions
No clinical data are available on the effects of RE I NU COLLAGEN FOR HIM on other special populations.

Paediatric Population
REINU COLLAGEN FOR HIM is not recommended for use by children under 18 years, as insufficient data are available concerning its safety and efficacy.

Other special populations
No clinical data are available on the effects of RE I NU COLLAGEN FOR HIM on other special populations.

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Health care providers are asked to report any suspected adverse reactions to SAHPRA via the "**6.04 Adverse Drug Reactions Reporting Form**", found online under SAHPRA's publications: *https://www.sahpra.org.za/Publications/Index/8.*

4.8 Overdose
See section 4.8.
In the event of overdose, treatment should be symptomatic and supportive.

5. PHARMACOLOGICAL PROPERTIES

Mechanism of action:
Collagen, Collagen peptides are small peptides derived from collagen. The most common method used to produce collagen peptides involves partially hydrolyzing isolated collagen to form gelatin, and then treating gelatin with specific proteinases to form the shorter collagen peptides.

MSM is a naturally occurring compound that is a metabolite of dimethylsulfoxide (DMSO). MSM is a source of sulfur for synthesis of the amino acids cysteine and methionine. Incorporation of MSM-derived sulfur into methionine is regulated by a limiting step involving micro-organisms in the intestinal lumen.

Vitamin C, contributes to the maintenance of good health. It is an antioxidant that contributes to cell protection from free radical damage. It contributes to the normal function of the immune system and the nervous system. It assists with normal collagen formation and also to the reduction of tiredness and fatigue.

Co-enzyme Q10, Coenzyme Q10 is a vitamin-like compound present in virtually all cells and in especially high concentrations in the heart, liver, kidney, and pancreas. Within the cell, 25 % to 30 % of total coenzyme Q10 is found in the nucleus, 40 % to 50 % in the mitochondria, 15 % to 20 % in the microsomes, and 5 % to 10 % in the cytosol. Coenzyme Q10 is fat soluble and acts similar to a vitamin.

Vitamin E, Vitamin E is an antioxidant which contributes to the protection of cells from oxidative stress and is a factor in the maintenance of good health.

Zinc, plays an important role in the metabolism of proteins, carbohydrates, lipids and nucleic acids. It is a cofactor in a range of biochemical processes, including the synthesis of DNA, RNA and protein. Zinc is also required for the hepatic synthesis of retinol-binding protein, the protein involved in transporting vitamin A.

Lycopene, is a carotenoid, but it is not a precursor of vitamin A. Lycopene has anti-inflammatory effects, dermatologic effects and fertility effects.

Selenium, is required for testosterone biosynthesis and the formation and development of sperm.
At least 25 selenoproteins help maintain the cellular integrity of sperm.

Pharmacodynamic effects:
Collagen, The effects of collagen peptides on skin wrinkles, elasticity, and hydration are thought to be related to down-regulation of the expression and activation of matrix metalloproteinases (MMPs). This has been demonstrated in a study of mice exposed to UVB irradiation. MMPs degrade insoluble elastin and catabolize fibrillin microfibrils, leading to lower levels of elastic fibers in the skin.

MSM might have anti-inflammatory activity by inhibiting the oxidative function of stimulated neutrophils and reducing levels of nuclear factor (NF)-kappaB, interleukin (IL)-1, IL-6, IL-8, and tumor necrosis factor (TNF)-alpha.

Co-enzyme Q10, may inhibit the activity of a particular aging-related enzyme.

Zinc, is required for the catalytic activity of more than 200 enzymes, and it plays a role in immune function wound healing, protein synthesis, DNA synthesis, and cell division.

Vitamin D_3, Cholecalciferol is synthesized in the skin via 7-dehydrocholesterol, a cholesterol precursor. Both ergocalciferol and cholecalciferol are biologically inert and require hydroxylation in the body to form the active metabolite, calcitriol.

Lycopene, There is interest in using lycopene to improve male infertility by reducing oxidative stress and improving mood and quality of life.

Selenium, plays a major role in the synthesis and metabolism of thyroid hormones. The thyroid gland has a higher concentration of selenium than any other organ in the body. Selenium is an essential component of the enzyme iodothyronine deiodinase which converts thyroxine (T4) to triiodothyronine (T3).

Pharmacokinetic properties:
Absorption/Distribution/Metabolism/Extretion:
Collagen,
Absorption: Due to their small size, collagen peptides are up to 90 % absorbed within 12 hours of oral intake. Some collagen peptides are hydrolyzed into dipeptides, tripeptides, or amino acids by enzymes such as peptidases, pancreatic proteases, and small intestinal brush-border proteases (101510). Maximum serum concentrations of dipeptides and tripeptides are observed 1-2 hours after ingestion.
Distribution: Collagen peptides are absorbed into the blood from the intestine and then distributed into other organs including the dermis, muscle, bones, liver, kidney, and brain. Collagen peptides can remain in the dermis for up to 2 weeks.
Excretion: Urinary hydroxyl-proline is an accurate biomarker of acute collagen intake for up to 6 hours after its consumption, but it is not sensitive to habitual intake of dietary collagen.

MSM,
Distribution: Supplemental MSM crosses the blood-brain barrier. Following ingestion of 1-3 grams, MSM is detectable at levels of 0.42-3.4 mmol/kg of brain tissue. MSM is found in human cerebrospinal fluid in concentrations of 0-25 micromol/L.
Excretion: In animal research, giving DMSO resulted in MSM excretion in the urine, but not the feces.

Vitamin C,
Absorption: Ascorbic acid (vitamin C) is readily absorbed from the gastrointestinal tract.
Distribution: Widely distributed in the body tissues. Concentrations are higher in leucocytes and platelets than in erythrocytes and plasma.
Metabolism: It is reversibly oxidised to dehydroascorbic acid; and metabolised to an inactive ascorbate-2-sulfate and oxalic acid which are excreted in the urine.
Elimination: Excess ascorbic acid (exceeding 100 mg daily) is rapidly eliminated unchanged in the urine. Ascorbic acid crosses the placenta and is distributed into breast milk.

Co-enzyme Q10,
Absorption: Coenzyme Q10 is a large molecule that is poorly absorbed when taken orally. Peak levels of coenzyme Q10 after oral administration occur in 5-10 hours.
Distribution: Administration of coenzyme Q10 increases coenzyme Q10 concentrations in the inner mitochondrial membrane.
Metabolism: Coenzyme Q10 is believed to be taken up by the liver and then transferred mainly to very low-density lipoproteins (VLDL) and redistributed from the liver to the systemic blood.
Elimination: The half-life of coenzyme Q10 is approximately 34 hours.

Vitamin E,
Absorption: From the gastrointestinal tract is dependent on the presence of bile and on normal pancreatic function. The amount of vitamin E absorbed varies widely between about 20 % and 80 % and appears to decrease as the dose is increased.
Distribution: It enters the blood via the chylomicrons in the lymph and is bound to beta lipoproteins. It is widely distributed to all tissues, and stored in adipose tissue.
Metabolism: Some vitamin E is metabolised in the liver to glucuronides of tocopheronic acid and its lactone.
Elimination: Some is excreted in the urine, but most of a dose is slowly excreted in the bile. Vitamin E appears in breast milk but is poorly transferred across the placenta.

Zinc,
Absorption: Occurs throughout the length of the small intestine, mostly in the jejunum, both by a carrier-mediated process and by diffusion.
Distribution: transported in association with albumin, amino acids and a 2-macroglobulin. Zinc is principally an intracellularion and approximately 95 % is found within the cells. Approximately 57 % of the body pool is stored in skeletal muscle,29 % in bone and 6 % in the skin, but zinc is found in all body tissues and fluids, including the liver, kidneys, pancreas,prostate gland and retina.
Elimination: Mainly in the faeces; smaller amounts are excreted in the urine and via the skin.

Vitamin B_3,
Absorption: The two forms of vitamin D, cholecalciferol and ergocalciferol, are well absorbed. However, cholecalciferol appears to be more efficient in raising 25-hydroxyvitamin D serum levels, which is the best measure of vitamin D status.
Distribution: transported primarily by chylomicron, which allows vitamin D to be distributed to peripheral tissues. If not taken up by peripheral tissue, vitamin D is transported to the liver, where it is converted to calcitriol.
Metabolism: Both ergocalciferol and cholecalciferol are biologically inert and require hydroxylation in the body to form the active metabolite, calcitriol.

Lycopene,
Absorption: Lycopene is fat soluble and is incorporated into micelles containing bile salts, cholesterol, and fatty acids in the intestine. These are carried to the intestinal wall, where lycopene is absorbed into the enterocytes by passive diffusion or with the aid of a cholesterol membrane transporter.
Distribution: Average plasma lycopene levels are reported to be 0.22 to 1.06 mcM/L.
Metabolism: Information on the metabolism of lycopene is limited, but it is thought to undergo oxidation and enzymatic cleavage.
Elimination: The half-life of lycopene in adult females consuming controlled diets for 10 weeks was determined to be 26 days, and lycopene was eliminated by first-order kinetics.

Selenium,
Absorption: L-selenomethionine has been shown to be absorbed more efficiently than parselenium. Peak serum selenium levels at 4 hours, and abundant amounts of selenium in the serum 24 hours post-consumption.
Distribution: The kidney accumulates the highest level of selenium and is the major source of plasma glutathione peroxidase (GSH-Px). Selenium must travel via the gastrointestinal tract, cross the intestinal barrier, reach the blood circulation, and then be distributed to the different tissues of the body, including the skin, which allows for selenium to be metabolized and presented to the entire tissue, potentially in an active form.
Metabolism: The metabolism of selenium by the brain differs from other organs in that at times of deficiency, the brain retains selenium to a greater extent.
Excretion: Selenium from food and supplements is excreted in the urine.

Preclinical safety data
No clinical data are available on the effects of RE I NU COLLAGEN FOR HIM.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients
Maltodextrin.

6.2 Shelf life
24 Months.

6.3 Special precautions for storage
Store in a cool, dry place at or below 25 °C. Do not use after expiry date.
Keep the container tightly closed.
Protect from light.
KEEP OUT OF REACH OF CHILDREN.

6.4 Nature and contents of container
200 g white to off white powder.
The container is a 500 mL PET container. The cap is a plastic cap with a tamper evident seal. Packed in a unit carton.

6.5 Special precautions for disposal
No special requirements.

7. HOLDER OF CERTIFICATE OF REGISTRATION
Biogen,
23 Stag Rd,
Glen Austin,
South Africa

8. REGISTRATION NUMBER
Will be allocated by SAHPRA upon registration.

9. DATE OF FIRST AUTHORISATION
Will be allocated by SAHPRA upon registration.

10. DATE OF REVISION OF THE TEXT
September 2022.

9701C01

JOB: B RE|NU_Collagen for him	**SIZE:** 210mm x 456mm
STOCK: Foil Substrate: ☐ Clear Substrate: ☐ White Substrate: ☐ Paper: ☒ Other: ☐	
COLOURS: ■ K; ☐ Available Slot ×7	**FINISHING:** ☐ Foil / Holographic Foil; ☐ Matte; ☐ Gloss; ☐ Spot UV; ☐ Doming; ☐ Embossing
PLEASE CHECK CAREFULLY Although we endeavour to proof accurately, we cannot accept responsibility for errors once proofs are signed and accepted by our clients.	