

Published clinical studies using Veri-te™ resveratrol sponsored or supported by Evolva

- Poulsen, M. M. et al. **Short-term resveratrol supplementation stimulates serum levels of bone-specific alkaline phosphatase in obese non-diabetic men.** J. Funct. Foods 6, 305–310 (2014).

In this RCT, the potential bone metabolic effects of Veri-te™ resveratrol supplementation in obese, non-diabetic subjects were studied. The outcome measure was the plasma levels of bone-specific alkaline phosphatase (BAP), a biomarker for bone formation that is reduced in postmenopausal osteoporotic women. Results showed that the plasma levels of BAP increased significantly in the resveratrol group vs. placebo. This result was associated with a tendency of total alkaline phosphatase to increase within the resveratrol group. No additional changes were detected in the other biomarkers of bone and calcium metabolism. The authors concluded that these results suggest that resveratrol supplementation influence bone metabolism, possibly representing a primary anabolic modality in preserving bone integrity

	24 obese, non-diabetic men
	4 weeks
	1,500 mg Veri-te™ resveratrol daily or placebo
	Levels of bone-specific alkaline phosphatase (BAP)
	Resveratrol increased plasma levels of BAP

- Ornstrup, M. J. et al. **Resveratrol Increases Bone Mineral Density and Bone Alkaline Phosphatase in Obese Men: A Randomized Placebo-Controlled Trial.** J. Clin. Endocrinol. Metab. 99, 4720–4729 (2014).

Metabolic syndrome is associated with low-grade inflammation, which may harmfully affect bone. In this RCT, the effects of resveratrol administration on bone health and metabolism were evaluated. The main outcome was the change in bone alkaline phosphatase (BAP) levels, a biochemical marker of bone formation. The study showed that BAP increased dose-dependently with resveratrol administration at all time-points, resulting in a significantly greater increase in BAP in the group supplemented with a higher dose of resveratrol. Lumbar spine trabecular volumetric bone mineral density also increased dose dependently with resveratrol administration. Research suggests that osteoporosis caused by metabolic syndrome and by menopause have very similar origins (i.e. low levels of sex hormones), so the bone-density enhancer effects of resveratrol found in this study are probably transferable to a menopause-derived osteoporosis, as also supported by other studies. The authors compared the effects of the resveratrol treatment with that of McClung et al. [Arch. Intern. Med. 165, 1762–1768 (2005)] in postmenopausal osteoporotic women treated for 24 weeks with either 20 µg teriparatide or 10 mg alendronate daily (12.2% and 5.1%, respectively) and argued that, although the effect of resveratrol was inferior to these recognized antiosteoporotic drugs, the reported increase over a shorter intervention period in a nonosteoporotic population encourages further research on the potential of resveratrol as antiosteoporotic supplement. Results suggested that supplementation with Veri-te™ resveratrol positively affected bone density, primarily by stimulating formation or mineralization.

	74 middle-aged obese men with Metabolic syndrome
	16 weeks
	150 mg or 1,000 mg Veri-te™ resveratrol daily or placebo
	BAP, lumbar spine trabecular volumetric bone mineral density
	BAP and lumbar spine trabecular volumetric bone mineral density increased dose dependently with resveratrol



Ongoing clinical studies with Veri-te™ resveratrol sponsored or supported by Evolva:

- Study led by Dr. Peter Howe and Dr. R. Wong in U. Newcastle, Australia. 160 postmenopausal women, for 24 months. 150 mg/day of Veri-te™ resveratrol. Focus on cardiometabolic, brain and bone health parameters. Completion of the study is expected by end of 2019 – with interim results by end of 2018. <https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=370696>
- Study led by Dr. Antoni Duleba (UC San Diego, USA) and B. Banaszewska (Poznan Univ., Poland). 60 18-45 y/o women for 6 months. Simvastatin (20 mg) + Veri-te™ resveratrol (500 mg) daily. Focus on Polycystic ovary syndrome (PCOS) and androgen levels. Completion of the study is expected by early 2019. <https://clinicaltrials.gov/ct2/show/NCT02766803>
- Study led by Dr. Veronica Witte (Max Planck Institute, Leipzig, Germany). 60 subjects older than 60 y/o for 6 months. Veri-te™ resveratrol (200 mg) + Quercetin (320 mg) daily. Focus on cognition via Learning Scores, MRI and biomarkers. The study has been completed and data should be made public soon. <https://clinicaltrials.gov/ct2/show/NCT02621554>
- Study led by Dr. Howard Tenenbaum (U. Toronto, Toronto, Canada). 40 smokers with chronic periodontitis for 6 months. Veri-te™ resveratrol (500 mg) daily. Focus on periodontitis via biochemical and structural parameters. Completion of the study is expected by mid-2018.
- Study led by Dr. Marcio Zaffalon Casati (U. Paulista, Sao Paulo, Brazil). 64 smokers for 6+6 months. Veri-te™ resveratrol (500 mg) daily. Focus on periodontitis via biochemical and structural parameters. Completion of the study is expected by late 2018.
- Study led by Dr. Nishant Gupta (U. of Cincinnati). 25 subjects with lymphangiomyomatosis (LAM) for 24 weeks. Combination of increased doses of Veri-te™ resveratrol (250 mg to 1 g/d) with a stable dose of sirolimus/rapamycin. Focus on safety and efficacy on LAM cells. Completion of the study is expected by late 2019. <https://clinicaltrials.gov/ct2/show/NCT03253913>
- Study led by Dr. Emma Wightman (Northumbria University, UK). 100 overweight and obese subjects for 12 weeks. Veri-te™ resveratrol (500 mg/d) in an acute dose and daily afterwards. Focus on microbiota, systemic inflammation and brain function. Completion of the study is expected by late 2018. <https://clinicaltrials.gov/ct2/show/NCT03448094>
- Study led by Prof. Karen Brown (U. of Leicester, UK). 10 subjects on a high fat diet for 2 weeks. Veri-te™ resveratrol (1g/d). Will study the interaction between resveratrol and a high fat diet in terms of changes in metabolic profiles, with a particular focus on fatty acids and ketones that may be involved in cancer development. Completion of the study is expected by late 2018.
- Study led by Prof. John Vissing and Nicoline Løkken (Rigshospitalet, Copenhagen, Denmark). 10 subjects with mitochondrial myopathy and 10 subjects with a fatty acid oxidation disorders in skeletal muscle in a cross-over study for 5 months (2x 8 weeks with a 4-week clearance period). Veri-te™ resveratrol (1g/d). The study will determine the effects of resveratrol supplementation on energy metabolism of muscle in patients with mitochondrial myopathies and skeletal muscle fatty acid oxidation disorders. Completion of the study is expected by mid-2019.