

One in three consumers are concerned about bone health and are looking for ways to support their bones.\*

Besides supporting and stabilizing healthy joints,<sup>4</sup> resveratrol has been shown to have beneficial effects on bone density.<sup>6-8</sup> It supports bone health in a way that synergistically complements the actions of vitamin D and calcium<sup>5</sup> making it a key addition to bone health products.

\*Source: 2015 Canadian Report, Global and Regional Mega-Trends: Understanding Consumer Attitudes and Behaviours in Health and wellness.

## Bone health, a matter of balance

The delicate balance between bone formation and bone resorption is lost with aging, when resorption overtakes formation. This process is further exacerbated by obesity-related low-grade inflammation and hormonal changes characteristic of menopause.<sup>1-3</sup>



## Resveratrol supports the balance between bone resorption and bone formation

Besides being known for supporting healthy joints<sup>4</sup>, resveratrol, unlike many supplements targeting bone health, promotes the creation of new bone-forming cells.<sup>5</sup> Moreover, in a recent randomized, placebo-controlled study<sup>6</sup>, supplementation with Veri-te™ resveratrol led to a significant increase in bone-specific alkaline phosphatase (BAP), an important biomarker of bone formation.

24 healthy overweight men, 4 weeks, 500 mg Veri-te resveratrol daily, BAP

## Resveratrol is shown to increase spinal bone density

In a follow up to the above study<sup>7</sup>, conducted with Veri-te resveratrol, the results show:

- A significant increase in BAP
- A dose-dependent increase in spinal bone mineral density (BMD), with a significant effect observed for the 1,000 mg dose
- That resveratrol supplementation may affect bone primarily by stimulating formation or mineralization

66 overweight men with unbalanced blood pressure, blood glucose and blood lipid levels, 16 weeks, 150 or 1,000 mg Veri-te resveratrol daily, BAP and lumbar spine bone mineral density

## Resveratrol supports bone health in people with unbalanced blood glucose levels

A double-blind, randomized placebo-controlled trial<sup>8</sup> investigated the effect of resveratrol on bone fracture risk and documented:

- Supplementation with 500 mg resveratrol prevented bone density loss, particularly in people with underlying health concerns prior to supplementation

192 people with unbalanced blood glucose levels, 6 months, 40 or 500 mg resveratrol daily, bone mineral density, BAP, serum calcium, phosphorus and vitamin D

## Veri-te™ resveratrol reduces risk of bone fracture in menopausal women

Evolve co-funds RESHAW (Resveratrol Supporting Healthy Aging in Women), the largest and longest resveratrol study ever conducted in post-menopausal women.<sup>9</sup> With a focus on bone health, the interim evaluation after 12 months of this double blind, placebo-controlled crossover study revealed:

- Improvement in the BMD measured in the lumbar spine and in the neck of the femur
- 36% reduction in hip fracture risk and a 9% reduction in the 10 year risk of a major osteoporotic fracture

125 post-menopausal women, 24 months, 75 mg Veri-te resveratrol twice daily, cardio-metabolic, brain and bone health parameters as well as cognitive task performance

## References

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2. Mobasheri A and Shakibaei M. Osteogenic effects of resveratrol in vitro: potential for the prevention and treatment of osteoporosis. *Ann NY Acad Sci.* 2013; 1290: 59–66.
3. Ginaldi L, Di Benedetto MC and De Martinis M. Osteoporosis, inflammation and ageing. *Immunity & Ageing.* 2005; 2: 14.
4. Khojah HM, Ahmed S, Abdel-Rahman MS and Elhakeim EH. Resveratrol as an effective adjuvant therapy in the management of rheumatoid arthritis: a clinical study. *Clin Rheumatol.* 2018; 37(8): 2035-2042.
5. Ornstrup MJ, Harsløf T, Sørensen L, Stenkjær L, Langdahl BL, Pedersen SB. Resveratrol Increases Osteoblast Differentiation In Vitro Independently of Inflammation. *Calcif Tissue Int.* 2016, Aug; 99(2): 155-63.
6. Poulsen MM, Ornstrup MJ, Harsløf T *et al.* Short-term resveratrol supplementation stimulates serum levels of bone-specific alkaline phosphatase in obese non-diabetic men. *J Funct Foods.* 2014; 6: 305–310.
7. Ornstrup MJ, Harsløf T, Kjaer TN *et al.* Resveratrol increases bone mineral density and bone alkaline phosphatase in obese men: a randomized placebo-controlled trial. *J Clin Endocrinol Metab.* 2014; 99(12): 4720–4729.
8. Feng J, Liu S, Ma S *et al.* Protective effects of resveratrol on postmenopausal osteoporosis: regulation of SIRT1-NF-κB signaling pathway. *Acta Biochim Biophys Sin.* 2014; 46: 1024–1033.
9. Howe P *et al.* Effect of 12-month daily resveratrol supplementation on brain health in post-menopausal women. 2017; Trial ID: AC. TRN12616000679482p.

## resveratrol re-imagined™

Veri-te™ resveratrol is produced using an innovative yeast fermentation process.

This means our resveratrol is:

**PURE:** >98% pure *trans*-resveratrol

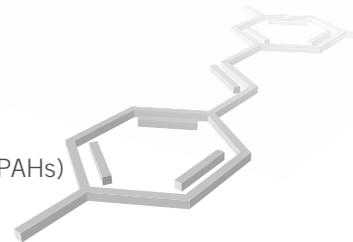
**SAFE:** free of contaminants (e.g. pesticides, emodin & PAHs)

**RELIABLE:** consistent batch to batch

**VERSATILE:** off-white, odorless and neutral taste

**SCALABLE:** large cGMP production capacity

**Veri-te™**  
RESVERATROL



## Our Products:

- Food Grade 98% purity for dietary supplements and foods and beverages\*
- Veri-Sperse™ 90% for when water dispersibility is needed
- Cosmetic-Grade resveratrol with >99% purity
- API Grade resveratrol product with DMF available

## Regulatory & Quality Status:

- EU Novel Foods approved, US self-affirmed GRAS, and other country approvals\*
- Made under cGMP and HACCP based food safety conditions
- Halal and Kosher certified resveratrol available

Evolva is committed to supporting clinical trials and research studies to further understand the important benefits of resveratrol on healthy living and aging.

## About us

Veri-te resveratrol is produced by Evolva, which was founded in 2004. Based on a strong research foundation, we focus on producing high-quality ingredients for use in applications for health, wellness and nutrition. We have a talented R&D team working on cutting edge science and technology to solve the supply chain issues of nature. Evolva is a pioneer and global leader in sustainable, fermentation-based ingredients. Visit [www.evolva.com](http://www.evolva.com) to learn more.

## For more information:

We have sales offices in the US and Europe, with distribution and regulatory approvals worldwide.\* Our technical team can advise on formulations and ideal combinations. Additionally, our marketing team can help you plan your marketing strategy for Veri-te resveratrol. Contact us to order free samples for evaluation.

Evolva's website: [www.evolva.com](http://www.evolva.com)

Veri-te resveratrol website: [www.veriteresveratrol.com](http://www.veriteresveratrol.com)

For general inquiries and customer service inquiries please email: [res@veriteresveratrol.com](mailto:res@veriteresveratrol.com)

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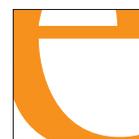
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\*Contact Evolva for a full list of countries where approved by regulation