

Pro Bono Packets

Product # P500

Each Packet contains:

2 capsules Osteoprev w/ipriflavone

3 capsules Pro Bono Min

Supplement Facts		
Serving Size 2 Packets		
Servings Per Container: 30		
	Amount Per	% Daily
2 packets contain	Serving	Value
Vitamin D3 (as Cholecalciferol)	1000 IU	250%
Vitamin K (as Phytonadione)	1 mg	1250%
Folic Acid	800 mcg	200%
Calcium (as Hydroxyapatite, Citrimal®)	1000 mg	100%
Phosphorus (as Chelate)	15 mg	1%
Magnesium (as Buffered Amino Acid Chelate, Citrate, Aspartate)	400 mg	100%
Selenium (as Amino Acid Complex)	200 mcg	286%
Copper (as Lysinate)	1 mg	50%
Manganese (as Chelazome®)	10 mg	500%
Molybdenum (as Amino Acid Chelate)	150 mcg	200%
Ipriflavone	600 mg	*
Strontium Citrate	1000 mg	*
Montmorillonite	150 mg	*
Boron (as Proteinate)	5 mg	*

* % Daily Value not established

ProBono Packets come in a large bottle with 60 individual packets. Each transparent packet contains 5 "00" capsules: Two yellowish capsules (Osteoprev), and three off-white capsules (Pro Bono Min).

A small amount of turmeric is added to Osteoprev to distinguish the capsules for quality control purposes.

The Supplement Facts box combines the values of both capsules and does not distinguish from which capsule each is derived.

Product Rationale:

These packets are intended to conveniently contain all the necessary components for maximum bone mineral density and strength. This product is adequate for prevention of bone loss as well as therapeutic for those already diagnosed with bone loss.

Strontium (as Citrate)¹⁻⁸

Strontium is a mineral with similar properties as calcium. It is unique in that it increases bone formation while also preventing bone resorption.

Mechanisms include:

- Increases pre-osteoblast replication and maturation into osteoblasts
- Incorporates into bone matrix increasing strength
- Inhibits osteoclast formation
- Inhibits resorption by osteoclasts

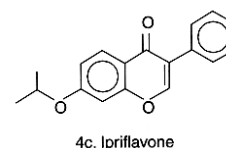
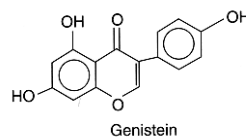
Clinical Trials with Strontium Ranelate (SR-a proposed new drug) have been recently conducted and found that 1 gram/day was minimally required to prevent bone loss in postmenopausal non-osteoporotic women (PREVOS)⁴. However, 2 grams per day of SR were needed to increase vertebral bone mineral density (BMD) in osteoporotic postmenopausal women (STRATOS)⁵. A review of these two is available.⁶

NEJM Phase III clinical trial⁷

1649 postmenopausal women (with previous osteoporotic fracture) were randomized to placebo or 2g/day of Strontium Ranelate (SR). SR group had half the number of fractures within the first year (41% less in three years) compared with placebo and the SR group had BMD increases (at three years) of 14.4% at the lumbar spine and 8.3% at the femoral neck. Calcium and vitamin D supplements were given to bring each individual up to approximately 1,500 mg and 800IU respectively.

Ipriflavone

Ipriflavone is an isoflavone derivative which has proven in animal and human research to enhance bone function and strength- particularly in counteracting bone loss during menopause.



- Enhances Calcium Transport⁹
- Regulate the differentiation and biosynthetic properties of human bone-forming cells in vitro
- Increase expression of proteins important to bone matrix deposition and facilitates the process of mineralization.¹⁰

Ipriflavone studies in women with established osteoporosis show consistent increases (or maintaining) of BMD, a reduction in fracture rate and a decrease in markers of bone resorption.^{11,12}

“Negative” JAMA article¹³

This was the first major trial not to show a clinical benefit for Ipriflavone in postmenopausal women. Interestingly, the placebo group had almost no drop in BMD during 3 years (all other trial- placebo group typically lost BMD). Also only 500mg/d of Calcium was given (source not given) to all participants which differs in that most trials used 1000 mg/d.

Vitamin D3 (Cholecalciferol)¹⁵

Vitamin D is a hormone-like vitamin which acts to regulate calcium absorption (in the gut) and incorporation into bone. Deficiencies of Vitamin D are common in the elderly and inversely related bone mineral density and fracture rates in postmenopausal women. Vitamin D intake reduces falling in elderly by an average of 22%.

Vitamin K (Phytonedione)¹⁶

Vitamin K is a coenzyme for the enzyme responsible for synthesizing osteocalcin, a protein involved in attracting calcium ions into bone tissue. Low circulating Vitamin K is associated with decreased BMD and increased fractures.

Boron¹⁴

Boron is known to be involved the functions of Ca, K, P, Mg and Vitamin D. Deficiencies in Boron in both animals and humans is linked with bone abnormalities.

Dosing

1 or 2 packets daily, taken with meals. It may be helpful to consider 1 packet daily as “preventative” and 2 packets daily as “therapeutic” although the 2 packet dose is needed to get the full dose of Ca, Mg, Vitamin D, Ipriflavone and Strontium in the literature. That said, the addition of all of those ingredients at 50% of there proven therapeutic dose is likely to have significant benefits over each individual ingredient combined.

Contraindications-Warnings

Vitamin K containing product: will counteract the blood thinning effects of coumadin (warfarin). Some individuals do not have a bowel tolerance for magnesium at these doses and loose stools may result (our chelated form should help eliminate this however).

References

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Disclaimer: These statements have not been approved by the FDA, they are not meant to be used to treat, cure, diagnose or in anyway recommend any product for any disease or condition.