



Treatment Option for Adult-Onset Hypogonadism

What is Clom-Resv-ZMA?

This formulation designed to improve endogenous testosterone production in patients with adult-onset hypogonadism, secondary hypogonadism.

It has the following ingredients with mechanism of action as follows.

Clomiphene 12.5mg- works as SERM (Selective Estrogen Receptor Modulator) which in composition is a racemic mixture consisting of zuclomiphene (z-isomer ~38%) and enclomiphene (E-isomer ~62%), each with distinct pharmacologic properties.

Clomiphene acts at the level of the hypothalamus, occupying cell surface and intracellular estrogen receptors (ERs) for longer durations than natural estrogen. This interferes with receptor recycling, effectively depleting hypothalamic ERs and modulating normal estrogenic negative feedback resulting in endogenous testosterone production.

Zuclomiphene works as an Estrogen Agonist & **Enclomiphene** as an Estrogen Antagonist. This simplifies the role as modulator by adjusting negative and positive feedback mechanism at pituitary for endogenous testosterone production and preventing decline in estrogen levels.

Estrogens are critical for regulating male sexual behavior centrally directly impacting libido. More importantly, 10 – 40pg/mL (Estradiol) is essential for fertility, Lipid metabolism and accumulation (specially around the belly) and bone formation.

Resveratrol -50mg- Natural *Aromatase inhibitor for xenoestrogens* but also doesn't counter the effects of natural endogenous estrogens. This mechanism allows body to conserve the testosterone it has and may facilitate in improving testosterone levels. Maintaining healthy body composition by preventing Leptin release from Adipocytes, increased antioxidant activity by Superoxide Dismutase (SOD) synthesis – antiaging enzymes and improve endothelial function.

ZMA+B6 210mg - a combination of Zinc, Magnesium and Aspartic acid (D) with Vitamin B6 - have a considerable impact in improving testosterone production *by providing nutrients required for* androgens including testosterone. One study indicated up to 30% increase in endogenous production when combined with an effective work-put plan to improve lean body mass.

How it comes, stored, and should be used?

It comes in oral capsule form and should be stored at controlled room temperature. It must be used as prescribed by health care provider.

Recommended daily dose is one capsule by mouth daily can be increased to 2 daily if determined by the prescriber.



What are the side effects of this combination?

This combination of compounded ingredients doesn't have a high side effect profile as doses used are moderate and effective for preserving and supporting natural hormonal synthesis.

Clomiphene, however used at a lower concentration can cause headaches, gastrointestinal discomfort, mild acne but these results are only related to higher doses of Clomiphene (50mg or higher).

References:

Off label therapies for testosterone replacement.; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5182219/>

Long-term safety and efficacy of Clomiphene citrate in the treatment of hypogonadism
<https://pubmed.ncbi.nlm.nih.gov/31216250/>

Trans-Resveratrol enhances testosterone level in sperm quality; <https://pubmed.ncbi.nlm.nih.gov/18277612/>

Resveratrol effects on Estrogen metabolism Quinone Reductase -
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3650734/>

Effects of a Novel Zinc-Magnesium Formulation on Hormones and Strength, Journal of Exercise Physiology:
<https://www.asep.org/asep/asep/BrillaV2.PDF>

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