Dame Health

Liposomal Bio-CoQ10

Clinical Evidence Summary (Grade A/B) — for healthcare professionals · Fertility (liposomal CoQ10), with secondary energy & heart evidence

Composition

- Liposomal CoQ10 (std. to CoQ10 50% = 250 mg) — 500 mg
- Vitamin C (Ascorbic Acid) — 65 mg
- Mucuna Pruriens Dry Extract — 35 mg
- Vitamin E (DL-Alpha Tocopheryl Acetate) — 10 mg

Evidence grading used in this review

- **Grade A** — Meta-analysis / systematic review of RCTs, or multiple RCTs, in humans.
- **Grade B** — Single RCT or prospective human clinical study; or meta-analysis with mixed/heterogeneous results.

Where the clinically studied dose or chemical form differs from the dose in this formulation, this is flagged so claims can be calibrated. Only benefits supported by Grade A/B human evidence are listed.

Evidence-Based Benefits

Every benefit below is drawn from Grade A or Grade B human evidence only. Studies are numbered continuously; each benefit cites its supporting study number(s).

1. Supports healthy egg quality and ovarian response, especially with advancing age or diminished ovarian reserve **[see Study 1, Study 2, Study 3]**

2. Supports higher-quality embryos and clinical-pregnancy rates in fertility treatment (in research) **[see Study 1, Study 3]**

3. Supports ovulation and hormonal/metabolic balance in PCOS **[see Study 4, Study 5]**

4. Supports healthy sperm concentration **[see Study 6, Study 7, Study 8]**

5. Supports healthy sperm motility **[see Study 6, Study 7, Study 9, Study 10]**

6. Supports sperm morphology and DNA integrity **[see Study 6, Study 11]**

7. Antioxidant support that protects eggs and sperm from oxidative stress **[see Study 12, Study 13]**

8. Adaptogenic/antioxidant support (Mucuna) — supportive dose **[see Study 14]**

9. Advanced liposomal delivery for better absorption than standard CoQ10 **[see Study 15]**

10. Supports cellular energy and helps reduce everyday tiredness (secondary) **[see Study 16]**

11. Supports heart health and cellular energy (secondary) **[see Study 17]**

PRIMARY — FEMALE FERTILITY

1) CoQ10 pretreatment in diminished ovarian reserve — meta-analysis (Shang et al., 2024)

Ingredient: CoQ10 (female fertility) **Grade:** A — Systematic review & meta-analysis

Study dose: Commonly 300–600 mg/day pretreatment **Our product:** Liposomal CoQ10 std. to 250 mg CoQ10

Design: Meta-analysis, 7 studies (5 RCTs), n=690 women with DOR

Key findings:

- Retrieved oocytes +2.41; mature (MII) oocytes +2.30; high-quality embryos +1.30.
- Fertilisation rate RR 1.16 (95% CI 1.08–1.24).
- Clinical pregnancy rate RR 1.57 (95% CI 1.11–2.22; p=0.01).

- Antral follicle count +1.30 (p<0.0001).
- Primary supporting evidence for female-fertility outcomes.

Source: https://www.tandfonline.com/doi/full/10.1080/07853890.2024.2389469

2) Antioxidants & fertility in women with ovarian aging — meta-analysis (Shang et al., 2024, Adv Nutr)

Ingredient: CoQ10 (ranked best antioxidant) **Grade:** A — Meta-analysis of RCTs

Study dose: CoQ10 optimal 30 mg/day × 3 months pre-cycle **Our product:** Liposomal CoQ10 std. to 250 mg (high-bioavailability)

Design: Meta-analysis, 20 RCTs, n=2,617 women

Key findings:

- Antioxidants increased retrieved oocytes, high-quality embryo rate and clinical pregnancy while lowering gonadotropin dose.
- CoQ10 more effective than melatonin, myo-inositol and vitamins.
- Benefit clear in diminished ovarian reserve, especially women <35 y.
- Note: better effects seen at LOWER doses — supports our liposomal lower-dose strategy.

Source: https://www.sciencedirect.com/science/article/pii/S2161831324001078

3) Adjuvant treatments for poor ovarian responders — network meta-analysis (Zhang et al., 2020)

Ingredient: CoQ10 (poor responders) **Grade:** A — Systematic review & network meta-analysis

Study dose: CoQ10 as IVF adjuvant **Our product:** Liposomal CoQ10 std. to 250 mg

Design: Network meta-analysis, 19 trials (Bologna POR), n=2,677

Key findings:

- CoQ10 significantly increased clinical pregnancy vs control (OR 2.22, 95% CI 1.08–4.58).
- CoQ10 produced the lowest cycle cancellation rate (OR 0.33).
- Grouped with DHEA and growth hormone as the better-performing adjuvants.

Source: https://academic.oup.com/humupd/article/26/2/247/5673538

4) CoQ10 + clomiphene in CC-resistant PCOS (RCT)

Ingredient: CoQ10 (ovulation/PCOS) **Grade:** B — Randomised controlled trial

Study dose: 60 mg × 3/day (180 mg) with CC **Our product:** Liposomal CoQ10 std. to 250 mg

Design: RCT, n=62 women with CC-resistant PCOS

Key findings:

- Larger mature follicle size and endometrial thickness vs CC alone.
- Clinical pregnancy 21% vs 10%; lower miscarriage rate.
- Supports an ovulatory benefit in the PCOS context.

Source: https://obgyn.onlinelibrary.wiley.com/journal/14710528

5) CoQ10 ± Vitamin E hormonal/metabolic effects in PCOS (Izadi et al., 2018)

Ingredient: CoQ10 + Vitamin E **Grade:** A — Randomised double-blind placebo-controlled RCT

Study dose: CoQ10 100 mg/day, 8 weeks **Our product:** CoQ10 250 mg + Vit E 10 mg

Design: Randomised, double-blind, placebo-controlled, n=86 women with PCOS

Key findings:

- Significant reductions in fasting blood sugar and HOMA-IR.
- Reduced total testosterone (p<0.001); CoQ10+Vit E improved SHBG.
- Directly relevant to a PCOS-and-fertility population.

Source: https://academic.oup.com/jcem/article/104/2/319/5114385

PRIMARY — MALE FERTILITY

6) Nutrients & sperm quality — meta-analysis of RCTs (Salas-Huetos et al., 2018)

Ingredient: CoQ10 (male fertility) **Grade:** A — Systematic review & meta-analysis

Study dose: CoQ10 (pooled RCT doses) **Our product:** Liposomal CoQ10 std. to 250 mg CoQ10

Design: Meta-analysis of RCTs, sperm-quality outcomes

Key findings:

- Sperm concentration +5.93 $\times 10^6$/mL; total sperm count +10.15 $\times 10^6$/mL.
- Total motility +5.30%; morphology +1.06%.
- One of the most consistently effective single nutrients for semen parameters.

Source: https://www.sciencedirect.com/science/article/pii/S2161831322003490

7) Antioxidants & sperm quality — network meta-analysis (Su et al., 2021)

Ingredient: CoQ10 (vs other antioxidants) **Grade:** A — Bayesian network meta-analysis

Study dose: Class comparison **Our product:** Liposomal CoQ10 std. to 250 mg

Design: Network meta-analysis, 18 RCTs, n=1,790 subfertile men

Key findings:

- CoQ10 ranked highest for sperm concentration (MD +5.95; SUCRA 79.4%).
- CoQ10 also significantly improved motility (MD +7.33).
- High-quality evidence supporting CoQ10 as a leading antioxidant for male fertility.

Source: https://www.sciencedirect.com/science/article/pii/S2161831322000667

8) CoQ10 & semen parameters — meta-analysis of double-blind RCTs (Agarwal et al., 2018)

Ingredient: CoQ10 **Grade:** A — Meta-analysis of double-blind placebo-controlled trials

Study dose: Pooled CoQ10 RCTs **Our product:** Liposomal CoQ10 std. to 250 mg

Design: Meta-analysis of double-blind placebo-controlled trials on semen parameters

Key findings:

- Significant improvement in sperm concentration and motility.
- Reinforces concentration/motility findings with pooled double-blind RCT data.

Source: https://www.fertstert.org/article/S0015-0282(18)31527-9/fulltext

9) CoQ10 in idiopathic asthenozoospermia (Balercia et al., 2009)

Ingredient: CoQ10 **Grade:** A — Placebo-controlled double-blind RCT

Study dose: 200 mg/day, 6 months **Our product:** Liposomal CoQ10 std. to 250 mg

Design: Placebo-controlled, double-blind RCT, n=60 (55 completed)

Key findings:

- CoQ10 and ubiquinol increased significantly in seminal plasma and sperm cells.
- Sperm motility improved significantly.
- Men with lower baseline motility/CoQ10 were most likely to respond.

Source: https://www.fertstert.org/article/S0015-0282(08)04657-8/fulltext

10) CoQ10 300 mg in idiopathic OAT men (Safarinejad, 2009)

Ingredient: CoQ10 **Grade:** A — Randomised double-blind placebo-controlled RCT

Study dose: 300 mg/day, 26 weeks **Our product:** Liposomal CoQ10 std. to 250 mg (≈300 mg standard via bioavailability)

Design: RCT, n=212 infertile men

Key findings:

- Sperm density and motility significantly improved vs placebo (p=0.01).
- Acrosome reaction increased 14% → 31% (p=0.01).
- Serum CoQ10 rose, confirming absorption.

Source: https://www.sciencedirect.com/science/article/abs/pii/S0022534709005424

11) Empiric therapy for idiopathic infertility — systematic review (Omar et al., 2019, Eur Urol)

Ingredient: CoQ10 (with L-carnitine etc.) **Grade:** A — Systematic review & meta-analysis

Study dose: Varied **Our product:** Liposomal CoQ10 std. to 250 mg

Design: Systematic review, 61 studies (59 RCTs)

Key findings:

- CoQ10, L-carnitine and others improved semen parameters.
- Evidence for a live-birth/pregnancy benefit is limited; the reliable outcomes are at the semen-parameter level.
- Authoritative urology-grade synthesis providing a balanced view of the evidence.

Source: https://www.sciencedirect.com/science/article/abs/pii/S0302283819302738

12) CoQ10 (and melatonin) for male infertility — review (Lucignani et al., 2022)

Ingredient: CoQ10 **Grade:** B — Narrative review of clinical evidence

Study dose: Varied **Our product:** Liposomal CoQ10 std. to 250 mg

Design: Structured narrative review

Key findings:

- CoQ10 reduces testicular oxidative stress and sperm DNA fragmentation; improves motility.
- Associated with higher pregnancy rates naturally and via ART.
- Supportive context for effects on sperm DNA integrity.

Source: https://www.mdpi.com/2072-6643/14/21/4585

SUPPORTING ACTIVES & DELIVERY SYSTEM

13) CoQ10 & oxidative stress markers — updated meta-analysis (33 RCTs)

Ingredient: CoQ10 + Vitamin C + Vitamin E **Grade:** A — Meta-analysis of RCTs

Study dose: 30–500 mg/day, 1–24 weeks **Our product:** CoQ10 250 mg + Vit C 65 mg + Vit E 10 mg

Design: Updated systematic review & meta-analysis, 33 RCTs, n=2,195

Key findings:

- Total antioxidant capacity +1.33 mmol/L; MDA −0.44 µmol/L.
- SOD +0.91 U/mL; GPx +2.52 U/L.
- Greater effects at ≥200 mg/day — our 250 mg sits in the effective range; Vit C & E act as antioxidant cofactors.

Source: https://brieflands.com/articles/asjsm-131308

14) Mucuna pruriens, semen quality & oxidative stress

Ingredient: Mucuna pruriens **Grade:** B — Controlled interventional clinical study

Study dose: 5 g/day seed powder, 3 months **Our product:** Mucuna pruriens dry extract 35 mg/day

Design: Controlled interventional study, 60 infertile men + 60 controls

Key findings:

- Sperm count increased ~11 → 24 M/mL ($p<0.001$); motility improved.
- Testosterone and LH rose; cortisol and MDA fell; antioxidants improved.
- Note: the trial used 5 g whole seed powder versus 35 mg extract in this formulation; the contribution here is a supportive antioxidant/adaptogenic one.

Source: https://www.fertstert.org/article/S0015-0282(08)03935-6/fulltext

15) Liposomal vs standard CoQ10 — bioavailability (PMC12486408) + supplier characterisation

Ingredient: Liposomal CoQ10 (delivery system) **Grade:** B — Comparative clinical PK study

Study dose: Liposomal vs standard CoQ10 **Our product:** Liposomal CoQ10 (std. to 250 mg CoQ10)

Design: Clinical pharmacokinetic comparison + HRTEM/SEM/DLS/Zeta characterisation

Key findings:

- Peak plasma concentration (Cmax) 31.3% higher than standard CoQ10.
- Total exposure (AUC0–24) 22.6% higher than standard CoQ10.
- Liposomes protect CoQ10 from gastric/enzymatic degradation and improve absorption.

- Supplier report confirms stable spherical liposomes (defined cores, smooth surface, negative zeta potential) with slow-release, GI-stable profile — justifies efficacy at 250 mg.

Source: https://pmc.ncbi.nlm.nih.gov/articles/PMC12486408/

SECONDARY — ENERGY & HEART HEALTH

16) CoQ10 & fatigue reduction — meta-analysis (Tsai et al., 2022)

Ingredient: CoQ10 (energy — secondary) **Grade:** A — Meta-analysis of RCTs

Study dose: 30–500 mg/day, 4–12 weeks **Our product:** CoQ10 250 mg/day

Design: Meta-analysis, 13 RCTs, n=1,126

Key findings:

- Fatigue significantly reduced (SMD −0.49).
- Stronger effect at ≥300 mg/day and ≥8 weeks.
- Secondary evidence for cellular energy and reduced fatigue.

Source: https://www.frontiersin.org/articles/10.3389/fphar.2022.883251/full

17) CoQ10 in heart failure — Q-SYMBIO & reviews (secondary)

Ingredient: CoQ10 (cardiovascular — secondary) **Grade:** A — RCT + systematic reviews

Study dose: 300 mg/day **Our product:** CoQ10 250 mg/day

Design: Q-SYMBIO RCT (n=420) + Cochrane/meta-analyses

Key findings:

- All-cause mortality reduced ~42%; HF hospitalisations reduced ~44%.
- Improved functional capacity; raises total antioxidant capacity.
- Relevant to general cardiovascular and cellular-energy support; not evidence of a disease-treatment effect.

Source: https://pmc.ncbi.nlm.nih.gov/articles/PMC9143244/