

## Frequently Asked Questions

### Omega-3 Antenatal Testing and Supplementation in Pregnancy

#### Omega-3 Testing

**1. When should omega-3 testing be performed?**

Testing should be completed before 20 weeks' gestation. Ideally, it should be timed with routine first or second-trimester SA Maternal Serum Antenatal Screening program (SAMSAS) blood tests. It can also be ordered separately as long as it's before 20 weeks' gestation.

**2. How is the omega-3 test ordered in South Australia?**

Testing is provided by SA Pathology. It can be ordered by ticking the "omega-3" box on a SAMSAS form, writing "omega-3 status test (SA Pathology)" on any standard pathology request form or selecting it from the SA Health electronic medical record "Maternal Antenatal" menu.

**3. What if results are reviewed close to 20 weeks' gestation?**

Starting supplementation around the 20-week mark is still considered effective for reducing preterm birth risk.

**4. Do I need to test omega-3 in every pregnancy? If it was low in the previous pregnancy, should I just recommend supplements? If it was sufficient in a previous pregnancy, is it likely to have changed?**

Omega-3 testing is recommended in each pregnancy because it provides a current, personalised measure of a woman's omega-3 status. This allows supplementation to be targeted to women who are low, rather than recommending high-dose supplements to everyone. Omega-3 status can change between pregnancies because it is influenced by current diet, supplement use, and pregnancy-related changes in maternal fatty acid stores. A woman who was low in a previous pregnancy may not be low again, and a woman who was sufficient previously may have changed. Testing ensures that advice is accurate for the current pregnancy and that supplements are recommended only when they are likely to be beneficial.

**5. My patient has had a previous preterm birth, should she just be treated with omega-3 supplementation regardless of the test results given she is high risk of preterm birth?**

No. High-dose supplementation is specifically targeted at women identified with low status. For women who already have sufficient levels, high-dose supplementation provides no additional benefit in preventing preterm birth and may be associated with an increased risk of early preterm birth. Testing is the only way to ensure supplementation is safe and effective for the individual.

6. **My patient has had a previous preterm birth and been advised to take progesterone. Is it worth testing for omega-3 and treating this as well if it is low?**

Yes. Every pregnant woman should be offered the opportunity to have their omega-3 status tested as part of routine pregnancy screening. While history of preterm birth and progesterone use are separate clinical decisions, correcting a low omega-3 status is a specific, independent intervention shown to reduce the risk of early preterm birth.

7. **Should omega-3 be tested prior to a planned conception and levels optimised prior to pregnancy if they are low?**

The current clinical focus and evidence base are centred on testing and supplementing once a pregnancy is established. Research demonstrates that as long as testing is completed and any required high-dose supplementation begins before 20 weeks' gestation, it is highly effective at reducing the risk of early preterm birth. In the current South Australian program, the test is specifically designed to be ordered alongside routine first or second-trimester maternal screening.

## **Omega-3 Results and Action**

8. **How are omega-3 results reported and interpreted?**

Results are reported as a percentage of total fatty acids in serum and fall into three categories:

- **Low** (< 3.7%): Advise high-dose supplementation to reduce risk of early preterm birth. Recommend dose:

- around 1000mg/day DHA+EPA combined (with at least 600mg DHA) OR
- around 1000mg/day of DHA alone

This should continue until 37 weeks' gestation, when risk of preterm birth has passed.

A list of suitable supplements for women with low omega-3 is available at

[sahmri.au/omega3](http://sahmri.au/omega3) - To find out more, visit: [sahealth.sa.gov.au/pretermbirth](http://sahealth.sa.gov.au/pretermbirth)

- **Moderate** (3.7 – 4.3%): No change is required. If already taking omega-3 as part of a multivitamin and mineral supplement or as a standalone supplement, this may continue.
- **Sufficient** (> 4.3%): Do not recommend high-dose supplements. If women are taking a supplement, ensure the omega-3 content does not exceed 250 mg/day.

9. **Why is the recommendation “around 1000 mg per day of DHA and EPA combined, including at least 600 mg DHA”?**

This tells you the target dose and the priority nutrient. Women should aim for a total daily dose of DHA+EPA of about 1000 mg. The DHA component is at least 600 mg because this has been the consistent component in most intervention studies to demonstrate benefit.

The wording allows flexibility because most Australian supplements don't match one exact formula.

#### **10. When should omega-3 supplementation be stopped?**

Supplementation should stop at 37 weeks because risk of preterm birth has passed. Continuing high doses beyond this time may unnecessarily extend pregnancy in some women.

#### **11. Why shouldn't women with sufficient levels take high-dose omega-3?**

Research indicates that only women with low omega-3 status in the first half of pregnancy show a significant reduction in preterm birth risk through high-dose supplementation. For those who already have sufficient levels, taking high-dose omega-3 provides no additional benefit in preventing preterm birth. Evidence also suggests that providing high-dose supplements to women who are sufficient may be associated with an increased risk of early preterm birth.

### **Clinical Considerations**

#### **12. Are there contraindications or safety considerations?**

Avoid omega-3 supplements in women requiring Clexane (enoxaparin) due to potential additive anticoagulant effects.

#### **13. Can omega-3 supplements be used with aspirin?**

Yes. Low-dose aspirin can be used concurrently with omega-3 supplements. Both may have mild anticoagulant effects; however, clinical trials have not shown an increase in adverse events when used together. Routine clinical use together is considered acceptable; clinicians should apply judgement in women at higher bleeding risk.

#### **14. Can omega-3 be used with progesterone?**

Yes. Omega-3 supplementation can be used alongside progesterone. These therapies act via different mechanisms and are commonly co-prescribed in women at increased risk of preterm birth. There is no evidence of harm from concurrent use, and management should be guided by the woman's overall risk profile.

#### **15. What about multiple pregnancies?**

Evidence for benefit in multiple pregnancies is currently limited; clinicians should apply clinical judgement. There is no known risk for taking high dose omega-3 in women with multiple pregnancies.

## Supplement Selection and Access

### 16. Do you recommend a specific omega-3 supplement brand?

No specific brand is recommended. A list of TGA-listed supplements that meet the required dosage is available at [sahmri.au/omega3](https://sahmri.au/omega3)

### 17. What options are available for vegetarian or vegan women?

Algae-derived vegan omega-3 supplements are a suitable alternative to fish oil.

### 18. How much do supplements cost?

Supplement prices vary. However, most fish oil supplements are priced around \$30-\$35 per bottle.

### 19. How can I access affordable supplements for socio-economically disadvantaged women?

Omega-3 supplements *may* soon be available at reduced or no cost for some women, including Aboriginal and Torres Strait Islander women and women who are socio-economically disadvantaged, through SA Health.

### 20. How can I be confident that an omega-3 supplement contains what it claims?

TGA-listed supplements must meet strict Australian requirements for manufacturing quality, ingredient verification, and labelling accuracy.

### 21. Should I be concerned about mercury or contaminants in fish oil supplements?

Reputable, TGA-listed supplements are purified to remove contaminants like mercury, dioxins, and PCBs, and are considered safe for pregnancy.

### 22. How can women choose ethically and environmentally responsibly sourced omega-3 supplements?

There are ethically and environmentally responsible omega-3 options available. Women who wish to consider sustainability can choose TGA-listed algal-derived or fish oil supplements from manufacturers that provide clear information about sourcing and sustainability practices.

## Patient Communication & Evidence Base

### 23. How do I explain omega-3 testing to patients?

"Omega-3 is an essential nutrient that must be obtained from the diet and is important during pregnancy. A blood test is the best way to check your omega-3 level, and if your level is low, taking a supplement can help reduce the risk of your baby being born too early".

#### 24. What is the evidence supporting omega-3 supplementation in pregnancy?

A Cochrane review of 70 trials showed a 42% reduction in early preterm birth (<34 weeks gestation). The Australian ORIP trial demonstrated women with low omega-3 levels were at increased risk of early preterm birth and that this risk could be reduced by 77% by taking a supplement with about 1000mg of DHA+EPA.

#### 25. Why not recommend omega-3 supplements to all pregnant women?

Only women with low omega-3 status show significant benefit. In women with sufficient levels, high doses provide no benefit and may be associated with an increased risk of early preterm birth.

#### 26. How does omega-3 work?

Whilst the mechanism is not fully understood, omega-3 fatty acids are believed to prevent preterm birth by acting as a competitor to the body's natural labour-inducing triggers. In many modern diets, a predominance of omega-6 fatty acids leads to an excess of potent prostaglandins (such as PGE2 and PGF2 $\alpha$ )—the same hormones used in medical gels to stimulate cervical ripening and uterine contractility. Omega-3 fatty acids compete for these same metabolic pathways, but the derivatives they produce, such as bioactive oxylipins, are significantly less potent at triggering labour. By increasing omega-3 levels early in pregnancy, these less-active compounds effectively dilute the stronger omega-6 signals and dampen inflammatory responses linked to birth, thereby extending the duration of gestation.

#### 27. Why supplement with omega-3 from 20 weeks?

Testing should occur and supplementation should commence before 20 weeks' gestation to be most effective. Effect sizes in the Cochrane review were larger in trials where supplementation commenced prior to 20 weeks gestation. This specific "window of opportunity" ensures there is enough time to alter the fatty acid balance and block potent labour triggers (prostaglandins) before they become active in late pregnancy. High-dose supplementation should then continue until 37 weeks, at which point the risk period for preterm birth has passed.

**Acknowledgement:** *These FAQs were developed by the Omega-3 Test and Treat Program Clinical and Scientific Advisory Group.*