Nutrition test for omega-3 in pregnancy

Omega-3 index | Dried blood spot test
Observations of pregnancies in the fish eating community of the Faroe Islands led to the hypothesis that a high intake of the long chain omega-3 fatty acids in pregnancy can extend gestation and delay timing of delivery.

These observations are backed up by data from the Danish Birth Cohort study showing that women with low omega-3 status in early to mid pregnancy have a high risk of early preterm birth less than 34 weeks of gestation.¹

The latest systematic review and metaanalysis of data from 70 randomized trials shows that intake of long chain omega-3 fatty acids in pregnancy is associated with a longer mean gestational length and reduced incidence of preterm birth and early preterm birth.²

Omega-3 levels in pregnant women are directly associated with a longer mean gestational length and reduced incidence of preterm birth.

However, the largest randomized trial³ of omega-3 supplementation in over 5400 pregnant women did not detect a reduction in preterm birth rates when it considered all pregnancies. Instead, secondary analyses suggested that women with singleton pregnancies and low omega-3 status are the ones most likely to benefit from omega-3 supplementation to reduce their risk of prematurity.

- Women with the lowest omega-3 status early in pregnancy (4.1% total fatty acids or lower) had the greatest risk of early preterm birth.⁴
- When women with singleton pregnancies and low omega-3 status were given 800 mg per day of omega-3 DHA their risk of early preterm birth reduced by 77% (from 32/1000 to 7/1000 live births).⁴

It is advisable for women with singleton pregnancies to be tested for omega-3 status in the first trimester.
What about those women with high omega-3 status (above 4.9% total fatty acids)?

- They are already at low risk of early preterm birth.²,⁴
- Additional supplementation of these women may increase their risk of early preterm birth.⁴

Measuring omega-3 fatty acids status is easy with Trajan’s solutions

Testing is easy with our user friendly and customized kits:

- Trajan sample kit and card
  - Just take a finger prick spot of blood, apply to our collection card and post to the laboratory.

- We analyze your DBS cards in our specialized nutrition laboratory at SAHMRI in Adelaide.
- If the SAHMRI facility is not in a suitable geographical location, we will choose another analytical testing laboratory closer to you, equipped with Trajan methodologies and instrumentation.

Trajan nutrition testing

The omega-3 pregnancy test equates the sum of all omega-3 fatty acids as a percentage of total fatty acids in a whole blood sample to the risk of early preterm birth.
Trajan is your partner for nutrition testing, operating globally with R&D centers, manufacturing facilities, commercial operations and customer support facilities in Australia, USA, UK, Europe, Japan and Malaysia. Visit us at www.trajanscimed.com or contact your regional Trajan representative for assistance and further information.

References:

Acknowledgments: Prof Robert Gibson, Professor Emeritus, University of Adelaide, Australia.

Trajan Scientific and Medical

Science that benefits people

Trajan is actively engaged in developing and delivering solutions that have a positive impact on human wellbeing. Our vision revolves around collaborative partnerships that improve workflows, delivering better results.