Assessment of cardiovascular diseases risk

Omega-3 index | Dried blood spot test
The omega-3 index story

The association between omega-3 fatty acids and cardiovascular disease was established following the findings that the Greenland Inuit (Eskimos) had low mortality from coronary heart disease despite a diet that is rich in fat.

In the 1970s Danish investigators proposed that this could be because of the high content of omega-3 fatty acid in the Inuit diet which consisted largely of fish, seal and whale.

Since that time numerous studies have investigated the association between omega-3 fatty acids (largely through fish in the diet) and cardiovascular risks in many other populations.

Importantly there have also been several large randomised controlled trials that have demonstrated that diets rich in omega-3 fatty acids such as EPA and DHA are associated with a lower risk of cardiovascular disease.\(^1\text{-}^4\)

It is advisable for people with a risk of cardiovascular disease to have their omega-3 index tested

The amount of long-chain omega-3 fatty acids in erythrocyte membranes, as assessed by the omega-3 index (EPA plus DHA in erythrocytes), has been shown to be a significant and independent discriminator of cardiovascular disease.\(^5\)

In particular, the risk of acute non-fatal myocardial infarction was significantly reduced in those people with a higher omega-3 index after adjusting for age, sex, history of diabetes, family history of cardiovascular disease, smoking status, hypertension status, and levels of glucose, total cholesterol and HDL-cholesterol.\(^6\)
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

Trajan provides advice and technologies to optimize your nutrition research through:

- Unique collection systems that are robust and reliable including dried blood spot technology.
- Validation of nutrition tests for your samples.
- Manufacture of customized sample and collection kits.
- Set up and optimization of nutrition laboratories.
- Design of dedicated nutritional analytical methodologies (GC, MS) optimization of nutrition test products.
- Automated sample preparation and injection instruments for fast, high throughput, low cost nutrition testing.
- Design of nutrition research projects and clinical trials.
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.