

You probably already know the **alpha is the beginning and omega is the end**. So the real title of this "Tips From the Professor" letter could be **"Omega-3s at the Beginning and Ending of Life"**

You probably already heard that omega-3s during pregnancy are important for mental **development** during the first few years of life, and that **omega-3s in the golden years help preserve mental function and prevent dementia**.

So I thought that these studies would be of interest to you because they add new perspectives on the role of omega-3s during the beginning and ending years.

Let's start with the alpha.

As part of study called the DOMInO trial (DHA to Optimize Maternal and Infant Outcome) in Australia, 700 pregnant women were give either 900 mg of omega-3 capsules or placebos from 21 weeks to the end of pregnancy. The health of the children at one year of age was studied.

As one of the outcomes studied, the investigators looked at the effect of omega-3 fatty acids on ectopic dermatitis and food allergies (DJ Palmer et al., British Medical Journal, DOI: 10.1136/bmj.e18, 2012).

Most of you instinctively know what food allergies are, but you may not be familiar with the term "ectopic dermatitis".

Ectopic dermatitis is an inflammatory skin disorder that is fairly common in children. For children with this disease their skin reacts abnormally and easily to irritants and to food and chemical allergens. It becomes red, flaky and very itchy. It is often associated with other childhood allergies.

And the maddening part, is that it comes and goes. Just when you think that the creams and potions the doctor gave you have cleared it up, it comes back again!

With that background in mind, let's look at the results.

The children of the women taking omega-3 fatty acids had 36% less risk of developing dermatitis and 50% chance of developing egg allergies during the first year of life.

And now on to the omega.

This was a Brazilian study looking at the effect of 2 grams of fish oil providing 0.4 grams of EPA and 0.3 grams of DHA per day on a 90 day strength training program for women around 64 years old (C.L.N. Rodacki et al., American Journal of Clinical Nutrition, DOI: 10.3945/ajcn.111.021915, 2012).

In this case the women taking the omega-3 fatty acids had **around 50% better muscle torque** (the power that the muscle can exert), **50% better rate of muscle torque development** (the rate at which the muscle can achieve maximum power output with a heavy load) and performed **around 50% better** in chair-raising exercises than the placebo group.

Of course, these are each individual studies that need to be repeated.

So what's the bottom line for you?

1) As I said earlier, there are a number of studies suggesting that omega-3 fatty acids during pregnancy are important for early mental development. Based on a single study, I won't promise you that taking omega-3 supplements during pregnancy will also prevent dermatitis and food allergies in your newborn child, but if you have a family history of childhood dermatitis or food allergies this might be one more reason to make sure to optimize your omega-3 fatty acid intake during pregnancy.

2) Similarly, I won't promise you that taking omega-3 fatty acids will improve your workouts. However, there are a number of studies suggesting that optimizing omega-3 fatty acid intake in your golden years is important for preserving mental function as you age. If that isn't enough to motivate you to optimize your omega-3 fatty acid intake, maybe the possibility of improved workouts will.

To Your Health!
Dr. Stephen G Chaney