



ARBOR FARMS MARKET

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Our May 2019 Newsletter for Healthy Living

Omega-3s and Asthma

According to the American Academy of Allergy Asthma and Immunology, 8.3% of children in the U.S. had asthma in 2016. Centers for Disease Control and Prevention (CDC) statistics suggest approximately 1 in every 12 people have asthma, including adults. Boys have a slightly greater risk than girls. The cost of asthma in children aged 5 to 17 included 13.8 million days of school lost and a median cost of \$983 per year. Children younger than 4 years were less likely to have asthma, but when they had an attack they were more likely to require emergency care. The economic burden of asthma, including medical cost, lost work and school days and mortality was \$81.9 billion in 2013 — the latest year available for these statistics — for children and adults combined. The annual per person cost was \$3,728.



According to the Mayo Clinic, asthma is a condition during which your airways swell, narrow and produce extra mucus. This makes breathing difficult and often triggers coughing, wheezing and shortness of breath. Symptoms may vary from person to person, as well as frequency of the attack and severity of the symptoms. Many sufferers are able to identify triggers, or the environmental factors increasing the risk of experiencing a flare-up. Common triggers include environmental irritants such as chemical fumes, gases, dust or perfumes, and airborne substances such as pollen, mold

and dried saliva shed by pets. Others may experience more symptoms when exercising in cold dry air.

Asthma is a chronic lung condition that may affect all ages, but usually starts during childhood. Your life depends on the air you breathe, and the quality affects your respiratory system and overall health. The World Health

Organization (WHO) estimates 92 percent of the world breathe polluted air. Nearly 7 million premature deaths are attributed to air pollution each year. A recent six-month study of children from Baltimore City has now found evidence linking diet and exposure to air pollution to asthma symptoms.

“Evidence suggests dietary intake has an influence on your body’s response to air pollution.”

In this study, researchers from Johns Hopkins Medicine gathered data from 135 children, aged 5 to 12, diagnosed with asthma. Roughly one-third of the children had mild symptoms of asthma, one-third had moderate and one-third had severe symptoms. The researchers used the definition of asthma severity based on the National Asthma Education and Prevention Program guidelines, which defines severity based on symptoms, inhaler use and forced expiratory volume, or how well the lungs forces air out.

The study gathered evidence through questionnaires, compiling data on diet, symptoms and inhaler use reported by the participants and the caregivers. Surveys were taken for one week at the time of enrollment, at 3 months and at 6 months into the study. Participants also had blood samples drawn at those times to assess changes in inflammatory markers, and equipment was left in the home to measure air quality.

The equipment measured particulate matter (PM) of 10 micrometers (PM10) and those measuring 2.5 micrometers and smaller (PM2.5). The children lived in Baltimore City, where previous research had demonstrated air quality often exceeded acceptable standards for outdoor air pollution set by the U.S. Environmental Protection Agency (EPA). Measurements in the participants home found PM2.5 measured 26.8 micrograms per cubic meter (mcg/m3). The EPA standard for outdoor air is 12 mcg/m3. The average concentration for PM10 was 39 mcg/m3. Every increment of 10 mcg/m3 of PM2.5 the children were exposed to also increased the risk of daytime asthma symptoms by 2%.

Additionally, dietary analysis revealed that each additional gram of omega-6 intake was associated with a 29% increased risk of moving into a more severe asthma category. Essentially, the researchers found higher levels of omega-6 in the diet were

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- Omega-3s and Asthma, *continued*
- May Monthly Coupon

2019 Organic Produce CSA

Homer Organic Family Farms



Our Farming Practices

Our farming practices will take you back to the 1930's. Our fields are plowed and worked with horses. Our large families provide many hands to do the hoeing and many other tasks that can only be done by hand. Food that was raised in the 1930's had much better flavor and many more nutrients because farmers were not dependent on the chemicals, pesticides and GMO seeds that most farms use today. Food that has been organically grown doesn't just taste better, but it's also better for you!

We want you to enjoy better health. It is important to know where our food is coming from. Everyone needs a farmer. Who or where is your farmer?

About Us

We farmers (there are now seven participating farmers in our Homer Community) have been raising produce for several years, providing fresh vegetables for Farmers Markets and several of the Ann Arbor food stores. In 2008, we decided to begin a farm share program (CSA). Being a farm share member connects you directly to the farm your food is coming from. We usually offer a couple farm visits during the summer months. A farm visit will not only acquaint you with our farming community, but also offers a glimpse of the efforts made to provide you with good, clean, wholesome food.

We, being of the Amish faith, do not have phones, computers or email, so our communication needs to be by mail, at the farmers markets or through our friends at Arbor Farms. Of course, you are always welcome to come out to our farms.

We welcome you for a farm visit!

What is a CSA Program?

By subscribing to a CSA you are investing in a share of the farmer's harvest. The CSA farm share program then provides you with fresh vegetables every week. The early harvest begins May 29th, continues throughout the summer, and ends October 10th (for a total of 20 weeks).

Not only are subscribers getting the freshest food, but they are also showing their support for the small farmer. The program works well for the farmers and members both. The farmer can plan how much to grow. The member knows they have a box of vegetables coming every week. It makes shopping quite simple. It broadens your eating habits, as you will try new things you've never had before. It can challenge the cook. A seed catalog to us is like a cookbook to you. Sometimes we like to try new items. So be our guest and enjoy the food.

What might I see in my weekly box?

Early Season: May/June

Asparagus
Leaf Lettuce
Swiss Chard
Kale varieties
Collards
Zucchini and Summer Squash
Peas: Snap and Shell
Salad Greens
Rhubarb

Summer Season: June/July/August

Lettuce, Broccoli, Cabbage
Radishes, Beans, Peppers
Zucchini, Cucumbers, Hot Peppers
Carrots, Peas, Tomatoes
Sweet Potatoes, Basil
Potatoes, Cantaloupe
Green Onions, Sweet Corn
Onions, Eggplant
Beets, Garlic, Watermelon

Late Season: September/October

Remaining summer crops,
Red Peppers
Hard Squash
Spinach
Late Greens
Turnips
Parsnips
And wrapping up the garden.

Community Supported Agriculture (CSA)

Subscribe now-May 15th.

Omega-3s and Asthma, *continued from page one*

associated with an increased percentage of neutrophils being generated in response to pollution. Neutrophils are a type of white blood cell linked with inflammation. Dr. Emily Brigham, pulmonologist from Johns Hopkins Univer-

sity, was lead author of the study. She points out that while the role of omega-6 is complicated, some metabolic by-products, such as leukotrienes, are known to be responsible for the inflammatory response in children suffering from asthma.

“Most consume far too many omega-6 fats, which tend to trigger inflammation when consumed in excess.”

Conversely, children who had a higher intake of omega-3 had a lower response to indoor particulate matter and seemed to be more resilient. The typical American diet is much higher in omega-6 fats than omega-3, which was also true in every child participating in the Baltimore City study. This study adds to a growing body of evidence suggesting dietary intake has an influence on your body's response to air pollution.

For example, a recent study published in the American Heart Association Journal *Circulation*, found: “A Mediterranean diet reduced cardiovascular disease mortality risk related to long-term exposure to air pollutants in a large prospective U.S. cohort. Increased consumption of foods rich in antioxidant compounds may aid in reducing the considerable disease burden associated with ambient air pollution.” Another study found supplementation with antioxidants helped modulate the impact of air pollution exposure on small airways in children who already had a diagnosis of moderate-to-severe asthma. In yet another recent double-blind, placebo-controlled crossover study involving adults, researchers assessed the effect of daily vitamin E supplementation for 14 days on the inflammatory features of asthma. Compared to placebo, vitamin E resulted in a greater reduction of asthma features.

Omega-3s are polyunsaturated fats (PUFAs) your body is unable to manufacture, hence you must obtain them from your food. They are used in a wide variety of bodily functions, including proper cell division and function of cell receptors, muscle activity, cognition and heart health. Importantly, the ma-

rine-based omega-3 fats docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) — two long-chained PUFAs found in fatty fish and krill oil — are actually cellular components, which make them crucial for optimal function-

ing of cells and mitochondria. These are not available in plant based foods. DHA is particularly important for your brain, as about 90% of the fat in your brain is DHA, while EPA appears to be of particular importance for heart health. Research funded by the National Institutes of Health (NIH) once again highlights the importance of your omega-3 level to your heart health and overall well-being. The study, published in the *Journal of Clinical Lipidology*, looked at the value of measuring blood levels of EPA and DHA to assess your risk for developing certain diseases. The data revealed a higher omega-3 index was associated with a lower risk for total cardiovascular disease events, total coronary heart disease events, and total strokes.

However, as demonstrated in the featured study, the balance of a standard American diet leans heavily toward omega-6 fat found in vegetable oils. Processed foods — everything from French fries to frozen meals and salad dressings to snack foods — are generally loaded with omega-6, due to the vegetable oils used to make them. Science supports the need for a correct balance of omega-3 to omega-6 fats to be your healthiest. Most consume far too many omega-6 fats, which tend to trigger inflammation when consumed in excess.

Ideally, you want to maintain a 4-to-1 ratio of omega-6 and omega-3 fats or less, which is nearly impossible if you're regularly eating processed foods or restaurant fare. Animal-based omega-3s are your best source for this essential fat. There are several strategies to get more of it into your daily diet. However, each has advantages and disadvantages.

Fish — Small, cold-water, fatty fish such as anchovies and sardines are an excellent source of omega-3 with a low risk of hazardous contamination. Wild Alaskan salmon is another good source low in mercury and other environmental toxins. Because much of the

fish supply is heavily tainted with industrial toxins and pollutants, including heavy metals such as arsenic, cadmium, lead, mercury and radioactive poisons, it is extremely important to be selective, choosing fish high in healthy fats and low in contaminants.

Fish oil — While fish oil may appear to be a convenient and relatively inexpensive way to increase your intake

Michigan Grass-fed Beef: Humanely-raised at Lamb Farm in Manchester, MI



Porterhouse & T-Bone Steaks only \$14.99/lb

of omega-3 fats on the surface, it typically delivers insufficient antioxidant support. It is also highly prone to oxidation, leading to the formation of harmful free radicals.

Krill oil is a preferred choice as an omega-3 supplement as it contains the indispensable animal-based DHA and EPA omega-3s your body needs in a form less prone to oxidation. With the help of phospholipids, the nutrients in krill oil are carried directly to your cell membranes where they are more readily absorbed. Additionally, they may cross your blood-brain barrier to reach important brain structures.

Grass-fed Beef - In addition to being high in omega-3 fatty acids, 100% grass-fed beef has a close-to-ideal ratio of omega-3 to omega-6 fatty acids (4.84 to 1.65). Grass-fed beef is also a good source of the B vitamins thiamine and riboflavin, as well as the minerals calcium, magnesium and potassium.

Reference: American Academy of Allergy Asthma and Immunology, *Asthma Statistics*. Center for Disease Control and Prevention, *Asthma in the U.S. Annals of the American Thoracic Society*, 2018;15(3). Mayo Clinic, *Asthma*. National Heart, Lung and Blood Institute, *Asthma*. WHO September 2016. WHO March 2014; 63:1. *American Journal of Respiratory and Critical Care Medicine*, 2018. *Johns Hopkins Medicine*, March 29, 2019. *Circulation*, Jan. 31 2019; 139:1776-75. *American Journal of Respiratory and Critical Care Medicine* Sept. 2002; 166:703-709. *Journal of Allergy and Clinical Immunology*, 2018. 141;(4):1231. *Pharmacological Research* 1999; 40(3):211. *Journal of Nutrition*, 2012; 142(3): 614. *Journal of Clinical Lipidology* 2018; 12(3):718.



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\$2 OFF

your next purchase
of **\$15 or more** at
Arbor Farms Market.

Limit one coupon per visit. No cash value.
Valid through 5/31/2019

2019 Organic Produce CSA Homer Organic Family Farms

**Duration: 20 weeks/
May 29 - October 10**

Cost: \$400

Share Size: 1/2 Bushel box
(2-person size, about 9-10 lbs
will vary w/ seasonal contents)

Subscriber Information

Name(s) _____

Phone # _____

Address _____

Phone # _____

City/Zip _____

E-mail _____

Choose your Pickup Time: (circle one)

Wednesdays @ 7:30AM or **Thursdays @ 2:30PM**

Picking up your box within one hour of designated time will yield the freshest produce. All pickups will take place in a designated area in front of Arbor Farms, outside the store and under our canopy to protect from the elements as much as possible. **You will be able to park, pick up your box, and be on your way in as little as 60 seconds!** Please note that boxes not picked up within 36 hours will be donated to Food Gatherers.

Choose your Payment Schedule:

\$400 paid in full

\$200 now, remaining \$200 by May 27th