Brain Drain Due to Silent Inflammation
ADD to Alzheimer’s Disease
by Barry Sears, Ph.D.

THE MIND IS THE LAST FRONTIER OF MEDICAL SCIENCE. YOUR brain contains thousands of unexplained mysteries. Researchers remain humbled by its complexities as they try to pinpoint the exact areas of the brain responsible for how you speak, experience love, learn to hate, and express creativity.

Because of the complexity of neurological function, your brain is very sensitive to silent inflammation. Since the brain has no pain receptors, silent inflammation could transform into full-blown inflammation (enough to cause pain in other parts of your body), and you would still never know it. That’s what makes neurological disease so terrifying. You may have no idea your brain is under inflammatory attack until it’s too late, and irreversible disease has set in. The dementia caused by Alzheimer’s disease, for instance, cannot be reversed once the damage is done. New medications may be able to slow the progression of Alzheimer’s, but still can’t return the brain to its normal functioning state.

Your best defense against the brain drain, therefore, is a strong offense. That means keeping silent inflammation under control on a lifetime basis. High-dose fish oil is your primary anti-inflammatory “drug”. Unlike pharmaceuticals that have a difficult time crossing the blood-brain barrier, the long-chain omega-3 fatty acids in fish oil have no problem crossing that barrier. In fact, sixty percent of your brain’s dry weight is fat, and much of this comes from DHA. This DHA is a critical component necessary for nerve conduction, visual fidelity, and energy production. This is why your grandmother often referred to fish oil as brain food.

If fish oil is so important, then isn’t it possible that a lack of fish oil in the diet will compromise your brain function? Wouldn’t you be more prone to neurological disease due to silent inflammation? The answer to both questions is a resounding, “Yes!”

Previous population studies have pointed to the fact that people who live in countries where fish consumption is very high (such as Japan) have the lowest rates in the world of heart disease and neurological disorders like depression. Yet, the amount of fish oil in the American diet has been steadily decreasing over the past century. It is estimated that our consumption of EPA and DHA is only five percent of what it was 100 years ago. During the same time period, we have had a dramatic dietary increase in pro-inflammatory omega-6 fats coming from vegetable oils. This fact, coupled with a dramatic increase in our insulin levels, should not make it too hard to figure out why our rates of neurological disease are skyrocketing. We simply have much more silent inflammation in our brains than we had in the past.

With the recent advent of ultra-refined EPA/DHA concentrates, we now have the ability to safely raise our levels of DHA and EPA in our brain. If we can raise these levels of anti-inflammatory fatty acids high enough, we should be able to lower our risk of developing mental disorders caused by silent inflammation. More importantly, we may finally have the power to reverse the effects of these conditions, if they’ve already debilitated our mental function. So, this is really the defining moment for these new purified grades of patented fish oil. We now finally have a product that we can take in high enough amounts to combat silent inflammation in the brain. Just like elderly people who can regain their lost muscle mass by working out with weights, I believe people with brain disorders can regain their brain function by following my dietary recommendations to reach the Anti-Inflammation Zone.

Attention Deficit Disorder

In recent years, attention deficit disorder (ADD) has received national attention as the condition has become an epidemic in the United States, afflicting an estimated three to five percent of our children. Although there are six different types of ADD, including attention deficit/hyperactivity disorder (ADHD), I have grouped them all together as ADD. One factor common to all ADD patients is a deficiency of the neurotransmitter dopamine. Drugs such as Ritalin, which increase dopamine production, are commonly prescribed to bring these conditions under control. Since high-dose fish oil also increases dopamine levels, it would make sense that it should help alleviate ADD—without the need for drugs.

Many of my insights into ADD have come from my associations with two colleagues, Ned Hallowell, one of the most respected leaders in the treatment of ADD in children, and Dan Amen, who did pioneering work with brain scans to identify different types of ADD by determining differences in blood flow to the brain (using a specialized imaging technique called SPECT). The fact that blood flow is also altered in ADD makes this condition a much more complicated disease than simply a decrease in dopamine levels in the brain. It appears that certain areas of the brain have an increased blood flow, giving rise to “hot spots” of increased activity. Here’s another interesting observation: The severity of ADD is directly linked to the level of silent inflammation in the blood, as measured by the Silent Inflammation Profile blood test.

Children with ADD have a much higher Silent Inflammation Profile than normal children. Therefore, the problem of ADD
is much more complicated than simply the lack of dopamine in the brain.

Currently, the treatment of ADD has focused on drugs, such as Ritalin, that increase the levels of dopamine. But what if this apparent lack of dopamine were a secondary symptom of increased silent inflammation? It is also known, from animal experiments, that long-chain omega-3 fatty acids also increase dopamine levels and the number of dopamine receptors in the brain. This would indicate that ADD may be more connected to a nutritional deficiency (lack of dietary EPA and DHA) than to any underlying medical or psychological condition. This hypothesis correlates well with animal studies that indicate, after three generations of deficiencies in the intake of omega-3 fatty acids, that significant behavioral and cognitive defects appear in their offspring. Today’s children represent the third generation of Americans who have been exposed to a dramatic decrease of long-chain omega-3 fatty acids in their diet. Initial published studies indicate that, if you give small amounts of EPA and DHA, there is a trend toward improved behavior in the children with ADD. In my initial pilot studies of children with ADD, I often needed to give them up to 15 grams of EPA and DHA per day to bring their Silent Inflammation Profile to a measurement of 2 (Ideal ratio is 1.5-3). Once they reach that level, their behavioral disorders become controlled to the same extent as by taking Ritalin. But, unlike Ritalin, which only treats the symptoms of ADD, high-dose fish oil appears to treat the underlying cause—silent inflammation.

The reason that children with ADD need so much EPA and DHA is that they probably have the same accelerated metabolism of omega-3 fatty acids as found in Alzheimer’s patients. Recent data has confirmed this hypothesis in children with ADD.

One major caveat: Once you reduce the fish oil intake, the Silent Inflammation Profile will probably increase again, and all the behavioral benefits quickly erode.

Summary

Reaching the Anti-Inflammation Zone is the best way to ensure that your brain is not under constant inflammatory attack. Since you won’t have any outward signs of “pain in the brain,” you won’t know you’re under the brain drain until it’s too late. That’s why you need to get a measurement of your Silent Inflammation Profile to see where you are, and to do periodic measurements to ensure that you’re staying in the Anti-Inflammation Zone. It’s your best shot at avoiding those diseases you fear most—the ones that not only drain your brain, but also drain life of its maximum potential.

Dr. Barry Sears is a leading authority on the dietary control of hormonal response, and the author of the #1 best seller on the New York Times book list, The Zone. A former research scientist at the Boston University School of Medicine and the Massachusetts Institute of Technology, Dr. Sears has dedicated his research efforts over the past thirty years to the study of lipids.

To learn more about The Zone Anti-Inflammatory Lifestyle Management program or ultra refined fish oils, call 1-800-404-8171 or visit www.drsearzonefast.com. To find out more about the AA/EPA blood test visit that measures Silent Inflammation, visit www.omega3testing.com/physician.html/ TAG

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