

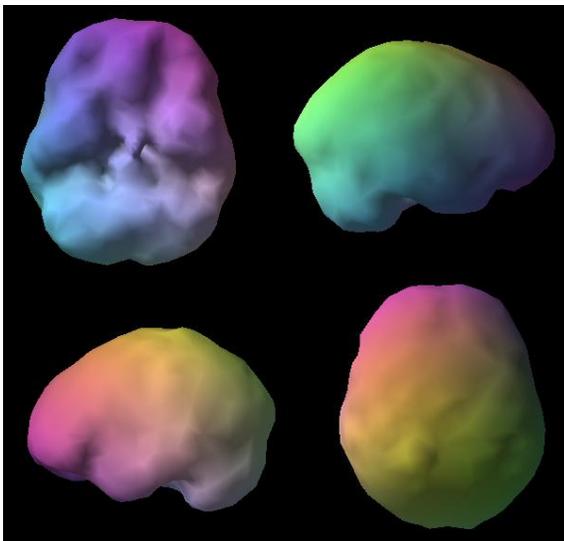
8 Warning Signs Your Brain Is In Trouble

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Jarred, 48, a successful CPA, came to the Amen Clinics because his memory was getting worse, which he initially attributed to “just getting older.” But when he heard me say on one of my public television shows that there is evidence Alzheimer’s disease starts 30 years before people have any symptoms, and that it has a genetic component, he decided to get evaluated. His memory was clearly worse than it was five years earlier, and his father and his father’s father had both died with Alzheimer’s disease.

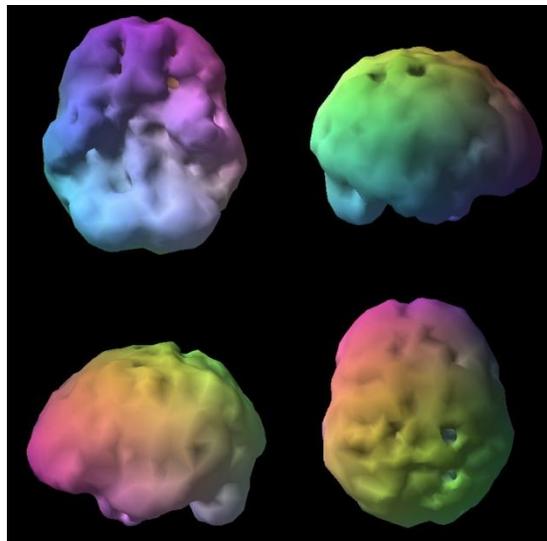
At the Amen Clinics we perform a brain imaging study called SPECT (single photon emission computed tomography) that looks at blood flow and activity patterns in the brain. Over the last 20 years our clinics have performed over 70,000 SPECT studies on patients from 90 different countries. A healthy SPECT scan shows full, even symmetrical activity (see figure 1). Jarred’s scan showed overall low activity, especially in the parietal and temporal lobes, areas of the brain that are low in Alzheimer’s disease. In addition to the SPECT scans we also take detailed clinical histories to learn the story of people’s lives and their main concerns and we do sophisticated cognitive testing. Jarred’s cognitive testing was in the low normal range, which given his educational record, indicated his brain function was on the decline.

Normal Brain SPECT Scan



Full, even, symmetrical activity

Jarred’s SPECT Scan



Multiple areas of decreased activity

Brain SPECT is a nuclear medicine study that evaluates blood flow and activity patterns. The image on the top left of each scan is looking underneath the brain. The image on the bottom right is looking down from the top. The top right and bottom left images are looking from the sides of the brain. The holes in scans are not physical holes; they indicate areas of significant low blood flow and activity patterns.

Seeing his scan and cognitive test scores, Jarred developed “brain envy” and wanted a better brain. Like many of our patients, Jarred was highly compliant with my recommendations. He feared his future if he did not change his brain. He avoided alcohol (he usually had 2-4 drinks a night, but was never drunk), limited his caffeine use (which had been up to 4-5 cups of coffee and three diet sodas a day), started to exercise, completely changed his diet, lost 35 pounds, and took some simple supplements, such as a multiple vitamin, fish oil, and a brain supplement I designed called Brain and Memory Power Boost. After 6 months on our simple program, Jarred’s cognitive test scores dramatically improved, as did his brain SPECT scan, and he reported that his energy, mood, and memory were better as well. Jarred literally changed his brain and improved the quality of his life. Likely, he also extended the health of his brain and reversed the brain aging process.

The Amen Clinics have built the world’s largest database of brain scans related to behavior, and as you might imagine we have learned many valuable lessons along the way. In this article I am going to give you 8 warning signs that your brain is in trouble, based on our work with brain SPECT. Jarred was smart to get his brain checked out before it was too late and he could still start to reverse the damage his brain had accumulated over time. You want to be smart too.

8 Warning Signs Your Brain Is In Trouble

1. Poor memory: One of the most important questions in diagnosing early dementia is whether or not your memory has deteriorated in the past 10 years. If your memory is worse than it was 10 years ago you need to be concerned. With the aging population, Alzheimer’s disease is expected to triple in the coming decades and there is no cure for it on the horizon. Of course, there are other causes of memory problems, such as low thyroid or testosterone levels, depression, alcohol or drug abuse, past brain injuries, and learning disabilities, but the key symptom is a change or worsening of memory.

I recently recorded an interview with a high-level business executive, Todd. He told me his memory was terrible at age 53. “I am sure it is just my age. I am just getting older,” he said. “I often have no idea where I put my keys and sometimes find them in the refrigerator, next to the eggs.”

“It is definitely not normal,” I replied. “I am 57 and my memory is as good as it has ever been. It is one of the little lies people tell themselves to justify their memory problems and bad habits. The denial prevents them from getting the help they need. Tell me about your diet and exercise.”

When Todd heard me mention exercise he perked up. “I exercise 5 times a week. I run long distances and am in great shape.”

Something wasn’t making sense to me. “And your diet?” I persisted.

He looked down. “It’s not so great. Every morning I have a Diet Coke and Pop Tarts in the car on the way to work. The rest of the day doesn’t get much better.”

Putting toxic fuel in a car will definitely decrease its performance. Putting toxic fuel in your body will definitely hurt your brain, no matter how much exercise you do.

“If you had a million dollar race horse,” I asked, “would you ever give it junk food?”

“Of course, not,” he said.

“You are so much more valuable than a race horse. It is time to treat yourself with a little love and respect,” I encouraged.

Three months later, Todd told me his memory had significantly improved. He also said I haunt him at every meal. I am hoping to do the same for you.

Don’t ignore memory problems.

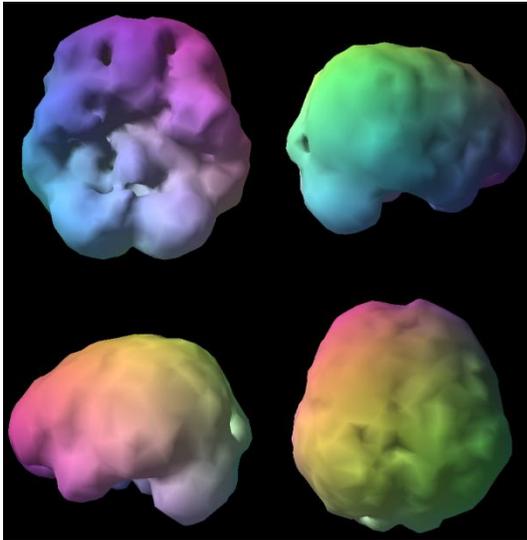
2. Poor judgment/impulsivity: The quality of the decisions you make is a direct reflection of the health of your brain; and it is the quality of your decisions that determines your success in life, whether it is in your relationships, work, money, or your physical and mental health. When the brain is troubled, for whatever reason, decisions are often more impulsive and less thoughtful.

I was on the Dr. Phil Show recently and scanned Jose, a man who struggled with severe marital infidelity. He suffered several head injuries in the past from playing football and participating in mixed martial arts, and he was also excitement seeking in his behavior. His SPECT scan showed very low activity in the front part of his brain. Given the pain of his pending marital separation and upon seeing his brain, Jose also developed “brain envy” and wanted a better brain. He cooperated fully with treatment, which included improving his diet to keep his blood sugar stable, eliminating alcohol and caffeine, getting at least 7 hours of sleep at night, and some simple supplements. On his treatment he had a dramatically positive result and has remained faithful to his wife for the past 18 months. His follow up brain SPECT scan showed dramatic improvement, as did the quality of his decisions.

Poor judgment or impulsivity can be the result of many different causes. In Jose’s case it was likely due to past brain injuries, which are very common, especially in past football players or mixed martial artists, although they are often forgotten. It can also come from low blood sugar, a lack of sleep, early dementia (especially the type that hits the front part of the brain), and toxic exposure from drugs, alcohol, or environmental toxins, such as mold or paint fumes.

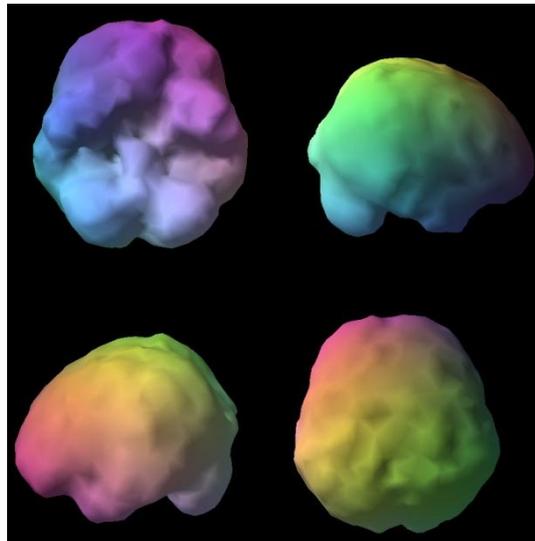
If you have noticed a deterioration in the quality of your decisions or those of someone you love, getting a proper evaluation is critical before the bad decisions ruin your life.

Jose SPECT Scan Before Treatment



Decreased activity in the front (prefrontal cortex) and the back of the brain consistent with a prior brain injury(ies)

Jose's SPECT Scan After Treatment



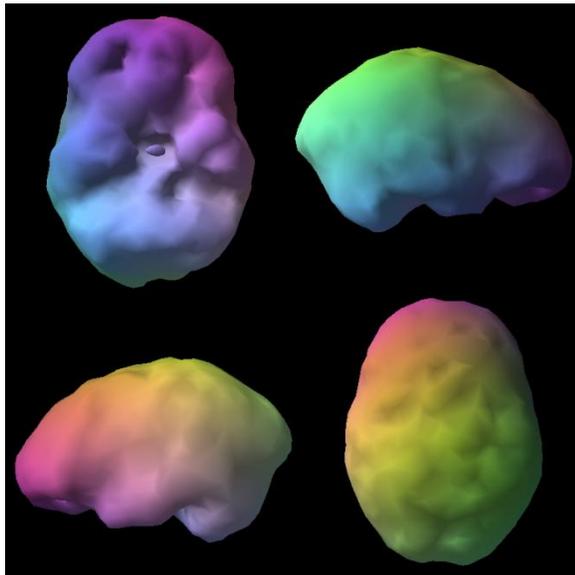
Overall dramatic improvement

3. Short attention span/distractibility: In order to obtain long term success in anything you do it is important to be able to stay focused on the task at hand. Having a short attention span or being easily distracted is often a sign of brain dysfunction and can wreak havoc in your life. Short attention span and distractibility are hallmark symptoms of attention deficit disorder (ADD), also called ADHD, which is associated with low activity in the front part of the brain, called the prefrontal cortex. Physicians generally think of ADD as an inherited illness that first shows itself in childhood, often together with hyperactivity and impulsivity, although not always. The major symptoms of ADD are short attention span, distractibility, disorganization, poor handwriting, and forgetfulness that last over a long period of time. ADD often persists into adulthood with its difficulties, causing underachievement in academics and at work, as well as relationship problems. People with ADD use medical services more often than others, and because of the distractibility and short attention span have more accidents and traffic tickets than others. In one study, 40% of morbidly obese people (BMI >40) had untreated ADD.

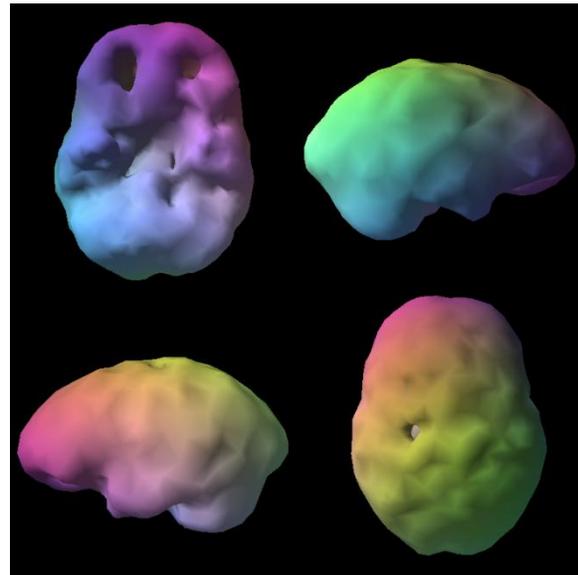
Janet, 62, came to see us for problems focusing. She said it had been a lifelong struggle and thought about being evaluated for ADD after her son and grandson had been diagnosed with it. She was disorganized. "You should see my garage," she said. "It would horrify you!" And she had never finished reading a book. In school she always thought she was stupid because she could never fully concentrate on her work. Teachers told her she was slow and would do better not going to college. Her brain SPECT scan showed low activity at rest, that worsened when she

tried to concentrate. This finding dovetailed nicely with what she and thousands of other ADD people have told me -- the harder they try to succeed the worse things get for them. It is sort of like putting your foot on the gas pedal for the car to go faster, but it then actually goes slower.

Janet's ADD Rest and Concentration SPECT Scans



ADD at rest
Mildly low activity in the front of the brain



ADD with concentration
Significantly lower frontal lobe activity

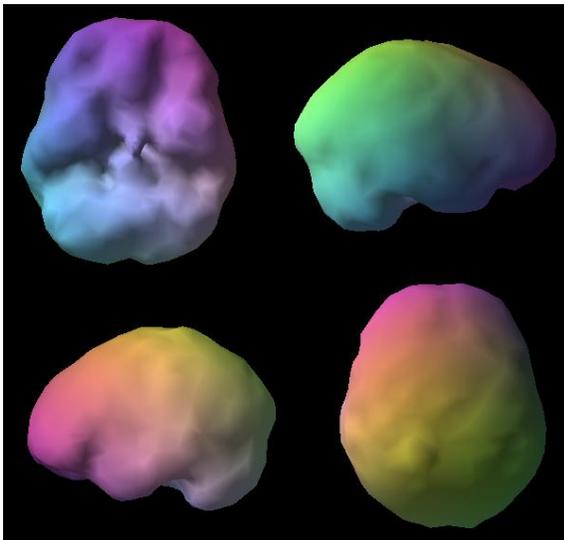
Short attention span and distractibility can be from other causes too, such as head injuries, drug or alcohol use, environmental toxicities, anemia, low thyroid hormones, and early dementia. If short attention span and distractibility are a problem for you, it is critical to get help. Once we understand the cause of these symptoms there are many natural supplements, medications, and cognitive and physical exercises that can be helpful. If it is ADD, it is a highly treatable disorder.

4. Depression: Depression is one of the greatest killers of our time, affecting 50 million Americans at some point in their lives. Nearly all of us have either suffered from depression or known someone who has. Two of my best friends had fathers who killed themselves. Depression, all by itself, is a risk factor for Alzheimer's disease, heart disease, cancer, and obesity. From time to time all of us feel sad, but when the sad or depressed mood stays for weeks at a time, we call it clinical depression. The hallmark symptoms of depression are a sad mood, trouble sleeping, feeling hopeless, helpless or worthless, suicidal thoughts, low energy, social isolation, and often foggy thinking. Our work with brain SPECT has taught us that there are a number of different types of depression. Some show overactivity in the brain, others show low activity. In one of the more severe types of depression, we see severe overall low activity in the brain. There are many potential causes of this depression type, including:

- drug or alcohol abuse
- environmental toxins, such as mold, paint or solvents
- past chemotherapy or radiation
- brain infections, such as meningitis or encephalitis
- a lack of oxygen, such as a near drowning or sleep apnea
- heavy metal poisoning, such as with lead, iron, or mercury
- anemia or
- hypothyroidism

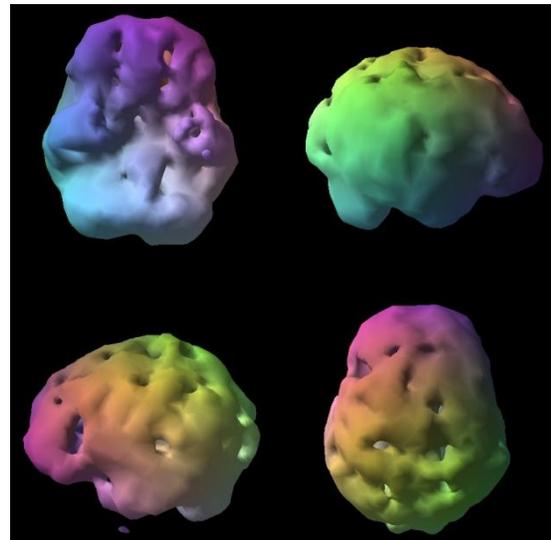
Will came to see us for resistant depression and brain fog. He had seen 6 other psychiatrists and had been tried on numerous medications. He was feeling hopeless, helpless, and worthless. He had frequent suicidal ideas and his family was extremely worried about him. He looked much older than his 63 years. His brain SPECT study showed severe overall low activity.

Normal Surface Brain SPECT Scan



Full, even, symmetrical activity

Will's Toxic Surface Brain SPECT Scan



Overall decreased activity

This is the classic pattern we see in a toxic brain. I met with him with his wife. He said, and she confirmed, that he did not drink or use drugs. Our first efforts needed to be directed at finding out why he had such a toxic looking brain. After extensive lab and environmental testing we discovered that he had been working in an office that had extensive mold growth. The office had experienced a flood the year before he first became depressed. Other co-workers also suffered with cognitive impairment.

The first step in treating this type of brain is to eliminate the toxin. If a person is drinking or doing drugs that must stop in order to heal. If there is mold in the environment that must be fully treated before the person can return to work. If there is severe anemia or hypothyroidism it is essential to treat it. If there was a loss of oxygen, chemotherapy, or radiation then we know

the culprit and can go straight into brain rehabilitation.

Depression is an urgent sign that the brain is in trouble. Getting it properly treated is essential for long term brain health. Treatment does not always mean antidepressant medication. We have seen that many lifestyle changes and nutritional supplements can have a dramatically positive effect on mood and overall brain function.

5. Overweight or obesity: Obesity is a serious national crisis with two thirds of us now overweight and one-third obese. Being overweight increases your risk for Alzheimer's disease, depression, heart disease, cancer, and diabetes. There are horrifying new research studies that show as a person's weight goes up the actual physical size of his or her brain goes down. That should scare the fat off anyone. In our own studies at the Amen Clinics we have also found that as your weight goes up, your ability to think and reason goes down, which means that over time if you don't get your weight under control ... it will become harder and harder for you to use your own good judgment to get healthy. The fat on your body is not just a storage place for excess calories; it produces toxic chemicals that promote inflammation and damage your brain. Looking good as a result of losing weight is not just about vanity. It is critical to both your physical and emotional health. When I first read these studies I told myself I had to get healthy. In my business I cannot afford to have a smaller brain. I quickly lost 25 pounds and have kept it off for more than 2 years.

I was at dinner recently with a friend who was not taking his weight problem seriously, even though he worked for a health care company! He was morbidly obese and ordered two soufflés for desert, on top of a huge meal. Dumbfounded by his bad judgment, I told him that he wanted to avoid the “dinosaur syndrome.”

“What's that?” he laughed.

“Big body ... little brain ... become extinct.”

Your brain is involved in everything you do, including how you think ... how you feel ... how you act ... and every decision you make. When your brain works right, you work right ... and when your brain is troubled you are much more likely to have trouble in your life. With a healthy brain you are happier, wealthier, wiser, and you just make better decisions; when your brain is not healthy, for whatever reason, you are sadder, poorer, less wise, and less effective. The first step to getting thinner, smarter, and happier is to boost the actual physical functioning of your brain.

It is your brain that pushes you away from the table telling you that you have had enough – or it is your brain that gives you permission to have the third donut ... which makes you look and feel like a blob. If you want a better mind and a better body, the first place to always start is by having a better brain.

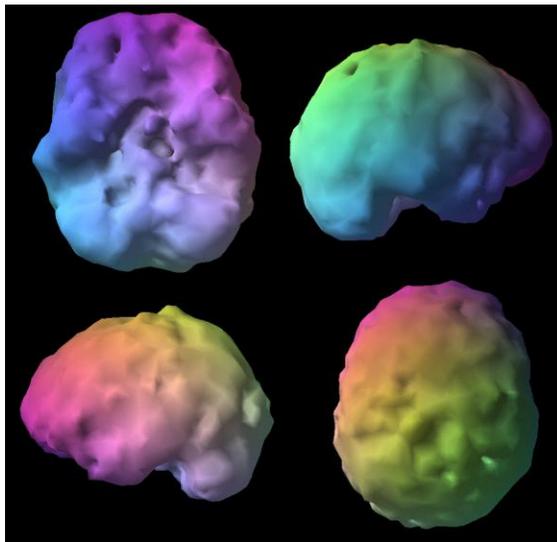
6. Low energy: Another sign of brain dysfunction is low energy. When people feel physically tired it is often due to low brain function.

Dwayne, forty-five, one of my close friends, came to the clinic for a scan. His energy had been waning, and his mind felt older than he liked. He had trouble concentrating, was starting to mix up names, was more forgetful, and was struggling with mental fatigue throughout the day, especially mid-afternoon and evening. He was working two jobs, one of which was being a psychotherapist in the evening. His wife was becoming very frustrated with him, as he had no time or emotion to give her. When we performed a brain SPECT scan on Dwayne, it showed overall decreased activity in his brain.

Dwayne had a slew of bad brain habits. He rarely got more than five hours of sleep, drank eight to ten cups of coffee a day, did not exercise, and mostly had a fast-food diet on the run. Dwayne had sent me plenty of patients for scans, so when he saw his own brain, he knew something had to change. “But I can’t stop the caffeine,” he said. “I will not be able to work at night. I will be a mess.”

“That is only your distorted thought giving a justification for the caffeine,” I said. Because of our relationship and the fact that Dwayne was a psychotherapist who understood my work, I could be candid with him. “You do not want to go through the pain of withdrawal so you rationalize that it is easier to continue to poison yourself. Not that smart.”

Dwayne’s Caffeinated SPECT Scan



Scalloping, toxic appearance

“No, seriously, I will fall apart without the caffeine,” he replied.

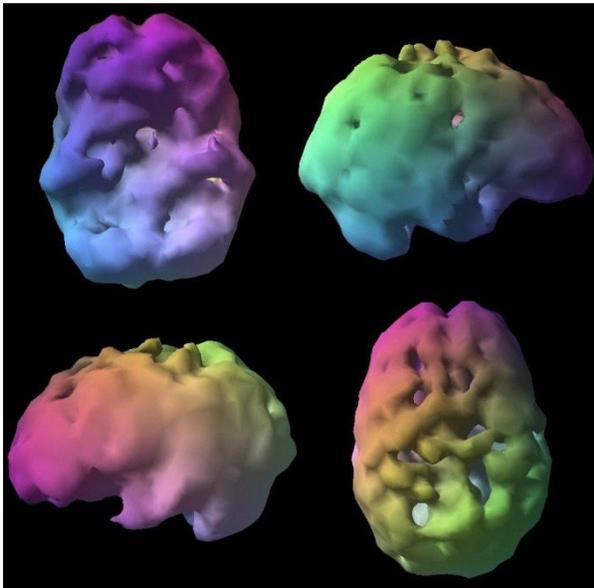
“Is that true?” I asked. “Can you absolutely know that it is true?”

Dwayne thought for several moments, then said, “I guess I really don’t know, but something has got to change.” Dwayne realized that his thoughts were only setting him up to fail, and he agreed to cut back on his caffeine use, get better sleep, and get on a brain-healthy diet. A month later, I got an excited call from Dwayne. He told me he had completely cut out the caffeine and that he was sleeping and eating better. “I feel ten years younger,” he said. “You were right, thank you.”

There are many energy robbers that hurt the brain. These include: infectious causes, hormonal issues (such as low testosterone levels), low or erratic blood sugar states from any cause, anemia, brain trauma, environmental toxins, many different medications, chronic stress, poor sleep habits, untreated past emotional trauma, and bad brain habits, such as a lack of exercise and the use of nicotine and caffeine.

I once had a close friend who came to see me complaining of feeling scattered, tired, and depressed. Her scan looked like she was an alcoholic or a drug addict, but I had known her for many years and knew that this was not the case. In working up medical causes of fatigue, we discovered she had “Pernicious Anemia” from a Vitamin B12 deficiency. After treatment her brain looked much, much better and she felt like her old energetic and focused self.

Vitamin B12 Anemia



Overall severe low activity

7. Erectile or sexual dysfunction: As strange as it sounds, erectile or sexual dysfunction is often a sign of brain dysfunction. The brain gets 20% of the body’s blood flow. I often say whatever is good for your heart is good for your brain. When your heart is healthy it can pump blood to the brain. So anything that hurts your heart, such as hypertension, hardening of the arteries, or

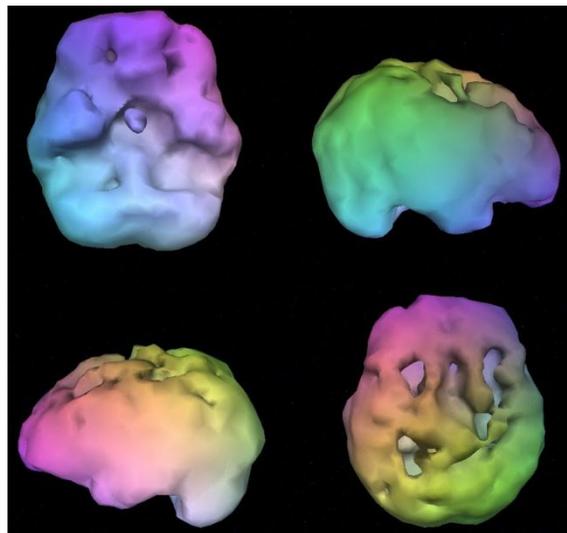
diabetes, also hurts the brain. When I wrote my book, *The Brain In Love*, I realized I had to add another important element. What about the genitals? Blood flow is critical to proper sexual function. Now I say whatever is good for your heart is good for your brain is good for your genitals. It is all about blood flow.

Did you know that 40% of 40 year olds report erectile dysfunction? Which means that 40% of 40 year olds are also beginning to show brain dysfunction. And 70% of 70 year olds report erectile dysfunction. Which means that 70% of 70 year olds also have brain dysfunction. In order to have a healthy brain it is critical to take care of the blood flow in your body.

I have also realized that healthy blood flow is critical to healthy looking skin, another factor critical in sexual functioning. Some researchers believe the health of your skin is actually an outside reflection of the health of your brain.

8. Chronic insomnia/sleep apnea: Another sign that your brain is in trouble is a lack of sleep or having sleep apnea. Research suggests that people who get less than 7 hours of sleep at night have lower overall blood flow to the brain and poorer cognitive functioning. Sleep apnea (snoring loudly, stopping breathing at night, or feeling chronically tired during the day) increases a person's risk for Alzheimer's disease and looks toxic on the brain SPECT scans. If you have insomnia or sleep apnea, it is critical to get it under control. If you have problems with cognitive function and are not sure if you have sleep apnea, it is important to get it checked.

Sleep apnea



Multiple areas of decreased activity

The exciting news is that if you have any of these warning signs, with appropriate help you can often get dramatically better. We were able to prove this in our recently published NFL

brain rehabilitation study. In the study we scanned and treated 115 active and retired NFL players, many with multiple concussions who had a high level of all of the warning signs listed above, including dementia, depression, obesity, low energy, and sleep apnea. On a brain smart program, 80% of our players showed improvement, both on their cognitive testing and their SPECT scans. Here is an example:

Randy Poltl recently came for his follow up evaluation. Randy was a defensive back for the Minnesota Vikings and Denver Broncos. He is tall, lean, and in seemingly good health. When he joined our study 18 months ago, he complained that his memory was not as good as it had been before and he was having to keep more notes. His main concern was that he had heard that many NFL players were struggling with memory problems, far more than others.

Randy's initial SPECT scan showed highly significant levels of brain damage, especially to his prefrontal cortex (judgment), temporal lobes (memory), parietal lobes (direction sense), and cerebellum (coordination). On our memory test, his memory scored in the 5th percentile, which means that 95% of people his age and education scored better than Randy, who was a Stanford graduate.

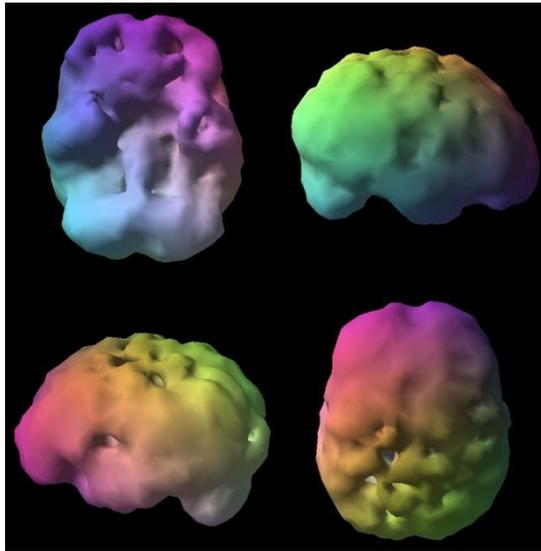
To our delight, Randy's follow up brain SPECT scan was dramatically better and his memory test improved 1,000%. How? One of the best things about Randy is that he was compliant with all of our directions. He faithfully took our multiple vitamin, NeuroVite; fish oil, Omega 3 Power; and our brain support supplement, Brain and Memory Power Boost. He did not miss doses and was consistent throughout the period of the study.

His follow up testing showed that his memory improved 1,000% and he scored in the 53rd percentile compared to his peers. His SPECT scan showed dramatic improvement in all of the areas that had been problematic.

Before his first evaluation Randy was clearly headed for trouble. With these simple interventions, his brain and test scores have shown remarkable improvement. His brain has literally aged backwards. I am very excited for Randy's progress. He took thousands of hits to his head playing high school, college, and professional football, some 30 years before we first saw him. Yet, despite the damage and the distance in years, his brain still showed a remarkable ability to recover.

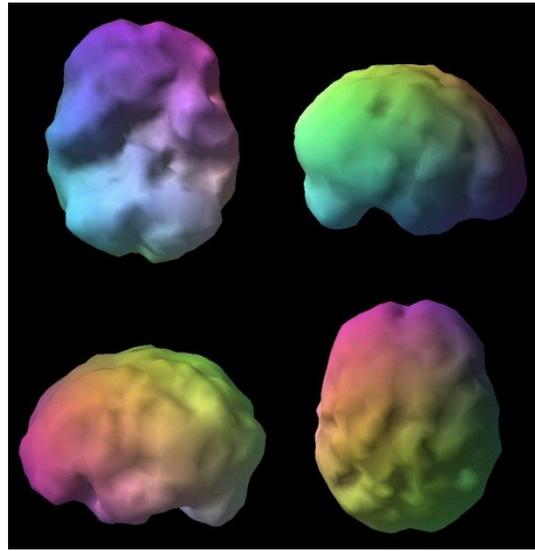
The good news about our study is that it has demonstrated the damaged brain's ability to show high levels of improvement on a simple, inexpensive, smart program.

Randy's SPECT Scan Before Treatment



Decreased activity in multiple areas

Randy's SPECT Scan After Treatment



Overall dramatic improvement

It is encouraging to have real evidence that most people are not stuck with the brain they have. Through a brain smart program, we can make it better. And, with a better brain, everything in life is better as well. Our SPECT scans over many years have helped us prove this concept.

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You can learn more at www.amenclinics.com or by calling (800) 564-2700. You can also join Dr. Amen's new online brain health coaching program at www.amensolution.com.

