

Big Brain Radio Show
11-12-05

(music)

D: Hey good morning and welcome to the Big Brain Radio Show. It's another beautiful Saturday morning in Minneapolis. Hey, since one of our big brain principles is to suspend judgment, every Saturday morning in Minnesota is beautiful, right? Hey, I'm Dr... I didn't get a 'yeah' ...

Z: I was just floored by the Minneapolis part. We're here for the greater Twin Cities Metropolitan, and Minnesota, and anyone who can pick this up on a cosmic link or the web... it's a beautiful Saturday morning for you as well.

D: You gave me away.

Z: Yeah, you Minneapolis boy. I'm like, what? You're just talkin' to the hood this morning?

D: Hey, I'm Dr. David Stussy and you can call me Dr. D.

Z: And I'm Dr. Zena Xanders, you can call me Dr. Z.

D: And we are the ...

B: Big Brain Radio Show!

D: Well welcome to basic brain training, part two. Last week we talked about the brain – the physical brain – and the nine principles. And we reviewed what Dr. Amen taught. So maybe we should just go back over those nine principles and just kind of review them so everybody understands how important ... in fact, who they are is their brain.

Z; Dr. D?

D: Yes.

Z: Could we just say the big brain philosophy first ... what ... the ... part of the two brains and how this fits into the big picture.

D: Well I thought they all had it memorized by now.

Z: No, no, no, no. I think we have some new listeners this morning.

D: Oh good.

Z: I've been out on the corner with one of those ... what do you call it ... sandwich boards... on the corner.

D: You wore that? Good!

Z: Listen to the Big Brain Radio Show, Saturday mornings at 11:00.

D: I've been giving you that to you for two weeks, you finally did it.

Z: I know. I put on a little bunny hat and so there's new listeners this morning. So tell them the big brain philosophy ... the two parts of the brain we talk about.

D: Well we only have two parts. A motor, which is the thing that makes things work, and a sensory, which is what we're more familiar with... our touch, our taste, our seeing, our hearing, our perceptions, how we move, our location in space and time. Those are our sensory and they come in and then we get a motor response. Like even digestion is a motor response... how we react to something. That's the physical brain. And that's very, very important. That's what we're talking about last week and this week. And then it's called the metaphysical brain. The metaphysical brain is the part of the brain that generates culture, ideas and who we are. Actually life itself is metaphysical. It's weightless... you can't measure it ... but we know it's there because we're experiencing it. And the big brain is a person who manifests the metaphysical principles and understands that they both work for both the physical brain and the metaphysical brain. And we talk a lot about these rules and principles and we repeat them enough ...eventually we're going to get some agreement, right?

Z: And we are doctors, so this is a health show as well. So we're interested in the health of your ... not only your brain, but your body and the body brain ... except for DeCarte separating the two and making a political deal, we are whole being.

D: As Dr. Amen says, he was wrong.

Z: Well, he was obviously out to get some dead bodies because he had some work to do. But okay, we'll grant him that. Anyway...

D: Anyway there's the evolutionary health style is what we call it. Evolution means to move on and to generate based on past experiences and our own genetic material. And health being the optimal number ... you gotta get this 'cause this is really good ... optimal number of regenerative ...

Z: Forward action.

D: Days.

Z: Days.

D: That means you want the best, you have to regenerate because if you're not regenerating you're doing the opposite, which is what we don't want. And forward action days, that means you're actually producing something, which means you're alive.

Z: And everybody has their own style, which is based on their values so in this show we cover the full spectrum. It's a holistic big brain show ... the physical brain, the metaphysical brain and you.

D: And we are our values. And we're going to take a little break here.

Z: Who is this we're hearing on the way out?

(music)

Z: This is AM 950 Air America Minnesota.

(music)

(music)

D: Hey, welcome back to the Big Brain Radio Show. And that's Von Shepard, singing a Bob Dylan song. And the other person was John Sebastian, at Woodstock ... one of my favorite times in my life.

Z: Are we having a little Woodstock flashback this morning?

D: Just played that one. Really I wanted a different one, so I got caught off-guard.

Z: I can't wait 'til my week of '70s disco music.

D: When is that week going to be?

Z: I don't know. I'm going to pick one here. I think maybe December... 17th.

D: Okay.

Z: All right.

D: All right. We're going to go over the nine principles of a healthy brain and how important the brain ... actually the ... the nine principles of brain-based care ... healthcare and health styles. So the first one is your brain is involved in everything you do ... how you think, how you feel, how you act. How well you get along with other people has to do with your moment... moment functioning of your brain.

Z: All right.

D: Any comments on that?

Z: No, I think we've enough where we got to move on.

D: Let's just go through them okay? So when your brain works right, you work right.

Z: This is number two.

D: When your brain is troubled, you generally experience trouble in your relationships, your work or within yourself. That's number two.

Z: Number three: The brain is the most complicated organ in the universe. There is nothing as complex as the human brain ... 100 billion neurons.

D: As many stars in the universe. And if you believe the first three things, then you understand that undiagnosed causes of a lot of behavior problems has to do with the fact that people have brain injuries. This is one of the most common things that I see in my practice... that people hurt their head. Now you don't need to pass out. When you pass out, that's a brain stem injury. A concussion or a head injury does not need to cause you to pass out. So the brain is very soft. It feels like a piece of butter. And so very traumatic brain injuries change people's lives forever and ever.

Z: The fifth principle is certain parts of the brain tend to do certain things. They control certain ways we activate ... all the functions in our body.

D: And certain problems then are associated with certain brain areas. Specific learning, behavioral, emotional, physical, organic problems are associated with exact brain function, and you can isolate those.

Z; Number seven, most chronic conditions including psychiatric illnesses are not usually a single or a simple disorder.

D: But they are multiple as are most of the conditions that we treat as health practitioners. And that imaging of the brain helps the mental ... the health ... all health professionals ... and if you can't do imaging you can do functional testing or specific examination or a proper history to find out if the brain is functioning properly. If physicians do not do that, often they will not be successful even if they're using somewhat of the right type of care.

Z: And the last thing is that the brain can actually change. And this idea of plasticity, Dr. D... say something about that.

D: Well, Eric Kendall won a Nobel Prize for this. The thickest, heaviest neurology book I have is by Eric Kendall. And plasticity... just what it sounds ... you can make things change. Our body has little things called neurons and they're firing constantly...even if you don't feel them.

Like all your pain neurons are firing right now, but they're not at threshold. They have to fire to stay alive, but of course we don't want them at threshold so other parts of our body keep them attenuated so we don't feel them. And that's the way it is with all our functions in their body. They're all firing, but they're not at threshold so we don't experience them. Most of the body is what we call inhibitory. It keeps things from happening. The problem with this plasticity, it can get mal-plasticity.

Z: Doc, doc, doc.

D: And things don't ...

Z: (laughter)

D: ...wait a minute... I gotta talk about the ...

Z: You gotta slow down.

D: The... mal-plasticity is when we make things go worse. Okay?

Z: Okay.

D: And that's by bad habits and we're going to talk a lot about that today.

Z: What does attenuated mean? For the listeners?

D: Well, they can look it up. No, it means to stop.

Z: To stop, okay. All right. Should we review the parts of the brain? So those were the principles of the brain. Do you want to review the different parts we covered last week? So the prefrontal lobe is the executive section of the brain. And it's the most evolved system of our brain. It's what makes us human.

D: Right. Go ahead. Oh, the temporal lobe is the ... the temporal lobe is ... if you put your hands on the side of your head, right above your ears ... not all the way to the top, but just above your ears and back by your ears is the temporal lobe. I think this is probably the most important part because

this is where we experience sound, memory, experience love, spirituality ... it is the seat of memory and experience.

Z: Then there is the parietal lobe, that's right by your ears. That's the world of sensory and perception and that's where sensory and motor activity meet.

D: Well it's above the ears up to the middle of the head.

Z: And the temporal lobe is around the bottom.

D: Yes.

Z: Right around the bottom.

D: And in that area is a thing called the singular gyrus and that runs right down the middle and kind of loops to the back, and this is where we are able to have our attention on things... where we have our flexibility or rigidity with even emotional ideas and with things and objects and people itself. It's the center of presence and certainty. And presence and certainty is one of our valid points for the big brain philosophy.

Z: And then we have one of the most interesting systems of the brain... the limbic system. This is where the emotions are. This filters all kinds of events. It's kind of the seat of emotion and bonding. Your sense of smell. For your libido is there. So the limbic system controls our mood, our attitude and our sense of love.

D: Well it's actually a center of unconditional love. Unconditional love comes from that and a couple of the other lobes. And the reason I'm point this out because these are some of the big principles of the big brain. The metaphysical brain comes from the physical brain and it's a manifestation of these brains functioning healthily. The next part is the basal ganglia, which is another little series of things in the middle – deep in the middle of the brain, and it integrates feeling and motion, enhances motivation... so if you're not feeling motivated your basal ganglia may not be working as well. Smooth motion, pleasure and ecstasy. Did you hear that folks? Pleasure and ecstasy. It's kind of our idle that our body works at... like a car that idles.

Z: Then we have the thalamus, which is kind of a modulator. It brings in all the information and integrates it. And this one is very connected to chiropractic care. We are both chiropractors and it's the gateway to our metaphysical experience. Say something about that doctor.

D: Well remember we said motor and sensory experience are what connects us and makes us human. And it also allows for a metaphysical experience where we come up with our ideas and our ability to create concepts. But if we don't have proper motor and sensory input, then we can't have that and the thalamus is the gateway to that experience.

Z: Finally, in the back of the brain, the occipital lobe. It's where our vision comes from. And it connects our internal and external environment.

D: You have to get that. Until we have vision or ability to visualize something ... it actually connects the outside world to the inside world ... and without that we're by ourselves. In fact, the only place we do exist is inside our brain. We don't experience anybody else. We don't know anybody else. We can only do that by our sensory... from what we see ... but all we really know is ourselves, and that's why the brain is so important and why we're going to talk about knowing ourselves better today. It has to do with a lot of things that we can control. And the last one is the cerebellum. The cerebellum is if you put your hand on the back of your head ... way back by these little bumps in the back ... this is the oldest part of the brain. It controls our ability to move, our coordination, our gait and our posture. But it has these prokinge fibers that allow us to have ... to anticipate what we're going to do, but also keep a record of how we did it. So we get better and better as we do things. There are also prokinge fibers in the heart, so I say this is the connection to the heart and the seed of the soul.

Z: Fantastic. So now we've said the nine principles and we've reviewed the brain physically. What's up for today's conversation about the brain?

D: We're going to talk about some different things. I thought we'd like to ... I've got some general facts I want to tell.

Z: Okay. Very good, let's hear some facts.

D: First of all, last week I made the statement that I thought all people playing contact sports should get a spec scan... look at their brain... because their behaviors get so bizarre. Football players ... and we all hear about that. But you know what I really decided is that all Presidents of the United States should have a spec scan.

Z: Oh oh.

D: Well, we examine everything else about them. If they go to a heart surgeon they do a functional test on them. I mean they go to heart specialists ... who is it? Chaney, that's got all the heart problems?

Z: Um hmm, um hmm.

D: What we know in fact that a number of our last Presidents did have brain injuries. President Reagan...

Z: No comment.

D: Well there isn't anything to prove. President Reagan obviously had Alzheimer's and we don't even know what part of his presidency he was here and what part he wasn't there. And it's a temporal lobe injury and part of parietal lobe injury. And President Clinton definitely had some judgment problems. And we're on Air America ... I don't need to say anything about the Bush family. So we know that Presidents should have spec scans. I think it should be part of their examination. They examine everything else. We should look at their brains so we know who we're dealing with.

Z: I wish we were a call-in show about now. This would be really interesting.

D: We'd be able to find out how much cocaine President Bush really took.

Z: Oh, geez.

D: Really, we would.

Z: Ah... all right. Stay tuned. We got some good brain facts. Some tips to make your like more ... run more smoothly, have more fun. This is AM 9..

D: Including the Presidents of our United States.

Z: This is AM 950 Air America Minnesota.

(music)

(music)

D: Hey, welcome back to the Big Brain Radio Show. This is a big brain day and that is Von Shepard... speaking an old, old song. I really like that song. I used to hear that in college. So we're going back a long, long ways. Let's talk about men and women.

Z: You had me so excited about the facts ... we're not going to do the facts?

D: Oh, that's right. We didn't get to that, did we?

Z: Yeah. We got so taken up ...

D: With the President.

Z: With the President. Yeah, got a little off track there. Let's talk about some facts.

D: Hey, the brain is 85% water, and it uses 20% of the oxygen we have, and 20% of the calories we take in. If they do a scan of our bodies, it looks like our brain's this heater and our body looks like a cold, dead, ghost.

Z: But it's not.

D: It's not.

Z: It's just water.

D: So the brain is firing away. Babies' brains make about 250 brain cells a minute...

Z: Wow.

D: ...and the adult brain weighs about 1,300-1,400 grams.

Z: Okay, who's the metric system... I have no idea what ... isn't it like 2-3 pounds? I don't know. I have to do the conversion.

D: A cat's brain is about 30 grams. There's 28 grams to a pound.

Z: Really? Okay. I'll just do the math, go on.

D: 28 grams to an ounce. Excuse me.

Z: Okay. Forget it. I never was good at that. Okay, go on.

D: 28 grams to an ounce.

Z: Somebody tell me what that is.

D: Okay, in college, 70% of football players and 62% of soccer players get concussions every year.

Z: Oh, I'm sure. You watch those games, it's just scary, once you're thinking about head injuries.

D: Okay, now let's talk about men and women.

Z: Okay, go ahead.

D: Men and women are different ... everybody knows that ... and their brains are different.

Z: I just have to interject in case anybody read the paper this morning, because the front page article of the Relationship section today said there isn't that much difference between men and women's brain. But let's do this and then I'll say what the article said.

D: Well, I have to read the article and see whether they're accurate or not.

Z: So say what you're saying and I'll tell you.

D: Well, physically there is a difference, okay?

Z: Yeah.

D: Men have more gray matter. They have much denser cells, in fact they ... it takes men 100 more grams of brain material to do what women do with less than 100 grams.

Z: Now that I can believe.

D: See? Already you know there's a difference. And we have a more active left hemisphere. And the left hemisphere ... there's a right and left... everybody's heard about that, right?

Z: Okay.

D: The left hemisphere is your detail-orientated. It gets things done. It makes planning, fore-planning, breaks things down. The right hemisphere, which is considered ... women are more active in ... is sort of the big picture. Now the truth is, women use both sides of their brain better...

Z: Because they have a thicker corpus collosum.

D: That's right. Better tell people about that one.

Z: Well that's the connection between the right and the left. It's like the train tracks back and forth. Women have more train tracks going back and forth. That's where they get the multi-tasking abilities. And that's really hormonally based because estrogen lays down more corpus collosum than testosterone, so there are physical differences there.

D: Yeah, so I think there are differences. Hey, um... like if the red... the left hemisphere would recognize like red, silk fabric, but a right hemisphere would call it a party dress. That's the difference between the two.

Z: Okay.

D: Get the whole picture, okay?

Z: All right.

D: So when the right brain gets injured, that's the people that are real happy and say there's no problem, everything is going just fine. And I think you...everybody can flash a couple people in their head when they think about that. They don't really... they can't perceive because they don't see the big picture. They can't see that there is something going wrong.

Z: You mean if the left side is hurt?

D: No, if the right brain...

Z: Then the right side's okay?

D: No, if the right brain is injured, because the right brain gets the big picture.

Z: So if it's injured, wouldn't it lose the big picture?

D: And then it thinks everything is fine. That's why women are better problem solvers than men. They're the ones that know their kids are sick; they know when their husband's having problems. Eight out of 10 medical doctor offices, or doctor appointments are made by women, because they can...

Z: They're picking up more information.

D: ...spot problems. When you're not spotting problems ...

Z: Oh, I see. It's the lack of the discernment from that right side.

D: You got it.

Z: I see. How about when you injure the left-side then? The analytical side? Then you lose obvious abilities... concentration and the ability to do analytic things.

D: Yeah, you can't integrate things, right. So men tend to not see problems as much. We tend to simplify them. And we are just not as active in ... as much cognition to our right brain. So we have different ways of looking at the world. And I think there's been enough proof from that ... what's that one show? Caveman?

Z: Oh, Defending the Caveman... which I think is still playing.

D: Yeah.

Z: It's a very funny show.

D: That kind of ... I thought that was one of the better demonstrations of that. So I'll have to read that article, but ...

Z: Do you want to know the three areas ... let me just tell you what this ... because people may have read this this morning and they're going to go "What are they talking about". It was a meta-analysis ... which first of all, so they take a bunch of studies and study the studies. But I can't say I agree with it. I'll look into it further, but they said that ... she said in this article that there's more of a difference between some women than there are between men and women, which I'm not sure about that. But she said there's only about three main areas where the meta-analysis said that men and women were different. Can you guess what they are? The obvious one ...

D: Sex.

Z: Sex.

D: Yeah.

Z: The "m" word.

D: Children and work.

Z: No... so anyway... the first one you got correct. The other one is in their strength of throwing. Like their physical strength to throw a ball or something like that.

D: Um hmm.

Z: And the last one was in the level of aggression. Men are more aggressive than women. But...

D: Those are three differences right there, from what I can tell.

Z: That's the only ones they really could perceive though. So anyway.

D: Actually, what they say is when you try and make these ... like men are more interested in work and money and stuff, and women are more interested in their family, etc. It's about 75-25. There's enough women there that have the other characteristics. So that could cloud the study, okay?

Z: So stick with the Big Brain Radio Show because we're not sure about that relationship.

D: Well one other thing is limbic systems. Women have larger limbic systems and that means they're better bonders. It's the emotional bonding center. But the parietal lobe in men tend to be larger, especially on the left side, which would explain the throwing. Okay? Because we're right-handed, left side controls that, it's more ...

Z: And it's also hormonal because testosterone is going to build more muscle mass than estrogen. So there's the brain issue and there's the hormone issue as well.

D: Right.

Z: And then there's individuality, so anything can be an exception.

D: All right. Do you want to go into something else? Like ...

Z: Yeah, what else you got?

D: Well, I thought we should talk about fish oils.

Z: Hey, I love fish oils. I think we talked a little bit about that last week. The brain is 60% fat by dry weight and the number one component we need is DHA, which is a type of Omega 3 oil that can only really be found in high quantities in fish oils. We talked about the fact that people have flax oil, but the ability for our bodies to convert the ALA, which is another substance, into the DHA is a very small percentage. So I'm an advocate of your teaspoon to tablespoon, depending on your condition, of high-grade, refined fish oil. What do you got?

D: Well, there have been some studies that say fish oil and Vitamin E don't go along. And I'm going to have to tell people that those studies aren't correct because the trouble is they don't test them in enough of a combined environment. Because fish oils do create free radicals, which is aging, but when you take vitamin E, that also ... it helps control the fish oils, but it also controls ... contributes free radicals. But if you take vitamin C with that, you get none of that. So you have to take fish oils, vitamin C and vitamin E together.

Z: Was there some problem with the vitamin E that they were ...?

D: The free radicals. It doesn't stop the free radical formation. But the vitamin C kind of holds it all in check.

Z: Free radical is something that's like a Pac Man destroying different cells via electrons ...

D: It's electrons being lost, yeah.

Z: It's not a good thing.

D: We call it aging... is the word.

Z: Yeah. Free radicals basically is what's responsible for the aging process in the body.

D: And I think you talked about the DHA, didn't you?

Z: Yeah, I just mentioned some of the DHEA... DHA, excuse me... DHA, not to be confused with DHEA, which is a sex hormone.

D: And the last thing we should say, when you get fish oil is you need to get pharmaceutical or top-grade oils. They don't have mercury. They are more expensive, but they're worth it. And if there's one thing that I want all my patients ... and I think everybody should take it is fish oils ... healthy brain, healthy life. Okay?

Z: You know Alzheimer's is such a huge concern in our society today and one of the things that Dr. Amen will probably talk about next week is that we now know that we can see the early signs and symptoms of Alzheimer's on these spec scans that he does, which is a physiological test of the brain. He used to say that he could find it in five to seven years before the onset. Now his studies have shown he can see the beginning of Alzheimer's symptoms nine years before that disease manifests. And the earlier you catch the symptoms, the more you can do to treat it. And fish oil is one of the number one things he and we use to treat those brain conditions like Alzheimer's.

D: I forgot what we were talking about, what? I'm just kidding.

Z: We're on to the news now.

D: That was supposed to be a joke.

Z: Come on back for more. This is AM 950 Air America Minnesota.

(music)

(news)

(music)

D: Hey, welcome back to the Big Brain Radio Show. And that little bizarre piece of music is Harry Nielson, who has wonderful songs. I think you have to hear them in their entirety.

Z: I'll just say we're getting the disco out man. I can't take this hippie music.

D: Now, I just want to say something. People are saying “Why are they talking about the brain?” Because the brain is undervalued, or underappreciated how much we need to be paying attention to our brain. We don’t know anything about the brain. In fact one of the things we want to share either today or next week when we have Dr. Amen... by the way we’re having Dr. Amen on next week, who wrote ...

Z: “How to Make a Good Brain Great.”

D: “Change Your Brain Change Your Life.”

Z: Um hmm.

D: He’s actually started a whole program in high schools. He decided why do students need to learn ... what would he say? Calculation... calculator...

Z: Quadratic Equations.

D: That was it. And he got a school that all they’re doing is doing some brain education and telling people how to take care of their brain to students, and it’s quite the breakthrough in California.

Z: It’s called practical neuroscience. He’s teaching it in high schools.

D: Yeah. And I think I have an outline of it here some place.

Z: Um hmm. How to take care of brain.

D: It makes sense. Because high school is for learning how to survive in life. So one of the first things I wanted to talk about was work. Because we as adults spend the majority of our life at work.

Z: At work.

D: And I call it the vehicle for our lives... that work is where we learn how to live, deal and solve our problems and manage everything. But if we don’t have a healthy brain, we can’t do that. And as funny as it sounds, brain runs businesses. It makes billions of dollars a year. It creates the

economy and there is no brain education at any work environment. There is no brain training, no brain health classes. There's nothing.

Z: That we know of.

D: That we know of. Well I think there's some ...

Z: Maybe someone's really avant garde on the cutting edge.

D: Well, Kenwood Chiropractic.

Z: Well there you go. So you can't say no one.

D: Um. So ... and this is one of the things that both Dr. Zena and I do that we ... we deal with treating... making the brain healthy either through nutrition or through stimulating the nervous system, and making it optimize its functions...

Z: Chiropractic adjustments.

D: Chiropractic adjustments and nutrition. Okay?

Z: Um hmm. And sensory exercises... brain exercises.

D: So we think the next big breakthrough is going to be in business because everybody pays attention to business and money and so I think it's going to show up. So we're ready to go. Anybody out there want to know more about it? Get a hold of me.

Z: (laughter)

D: Um... so... I've got this little story. Wesley was the leader of a large research group and he ended up getting fired because he had such poor social skills and temper tantrums. Sherry was an office manager in a large clinic. She got let go because she couldn't stay organized and she was fired because she was unflexible and rude to everybody. Bill was a manager of a department store. In ten years he was fired ... after ten years he was fired for stealing. Danny was a manager of a local grocery store and he was fired after he was caught having sex with one of the cashiers in the office. Now what did they all have in common?

Z: A brain injury.

D: Yes... brain injury is...

Z: Poor judgment.

D: ...mislabeled ... this is what I want people to get ... mislabeled as bad behavior.

Z: And don't we all know people like that, doing these weird things in the work place. I think we all have had an experience like that. But their bad behavior may be coming from a brain injury. Yes?

D: Right. Wesley had a temporal lobe injury, Sherry had a anterior cingulated girus injury; Danny and Bill had pre-frontal cortex injuries; and Steve had a toxic injury from having too much coffee. Coffee you say? Coffee is very damaging to the brain.

Z: Yeah and in the workplace the coffee pot is always in the center usually of the office.

D: Yeah. Any studies they've done... the first half a cup of coffee stimulates you. After that it drives your brain and your sugar level... everything ... down, down. That's why people keep trying to have more and more.

Z: Um hmm. And have a little donut with their coffee to get bumped up... blood sugar up. Creates a vicious cycle.

D: So the brain is involved in everything you do and you need to take care of it. So there's a work example. Ah, let's see. They can... they have found that when you have a high challenging work ... when you get work that gives you a lot of challenge...

Z: Very stimulating.

D: ...and high social demands, you have less chance at developing dementia, or Alzheimer's, or those variations of that.

Z: Because you're running those patterns and expanding the brain conscious... continuously.

D: Now there are some jobs that are actually more dangerous. You were talking about Alzheimer's?

Z: Yes.

D: There are some jobs that are more dangerous for that. Um... People in dentists ... people who grade things and sort things in industry and agriculture... they have a form of dementia before age 65.

Z: And partially they think some of that is due to the chemical exposure. Hairdressers....

D: That's another group I was just going to say that. Veterinarians and hairdressers and graders and sorters again.

Z: Painters. People who work around a lot of chemicals are at a higher risk for getting Alzheimer's.

D: Right. And I found people ... they didn't have dementia, but they had motor skill loss from working around car sprays, and paint shops...

Z: Neurological changes.

D: Um, yeah. Furniture people ... who...

Z: Refinish.

D: ... refinish furniture... very bad. They don't ... and the thing is, with a little thought, good ventilation, masks and some of the thing ... washing their hands, wearing gloves...

Z: Yeah.

D: I had a patient ... was wanting to bring in a friend of hers who had this Parkinson's... and she had had toxic... it was due to something she did with her hands. And she still wouldn't wear gloves. Now why would that be? This is very important to get.

Z: I don't know, why wouldn't she wear gloves?

D: Because she had damaged her brain where she cognitively couldn't make that decision.

Z: Hmm.

D: See that's why people ...

Z: She couldn't get the reasoning of ...

D: Yeah, that's why people get in denial with a condition. You look at them and say well they ought to know they have a problem. No they don't.

Z: Doesn't even occur to them.

D: You know I see it all the time. They don't know. And then pretty soon they go, you know, I think I got this problem. It's kind of like the Scooby Doo thing... (noise)...

Z: (noise)

D: Yeah. Let's see. That's enough about work.

Z: Okay.

D: Why don't we talk about the environment, because we kind of started in on that.

Z: How the environment is affecting our brains.

D: Right. And one would be ... today you hear about kids' games and video games.

Z: Um hmm.

D: And high amount of electronic input. And one of the things ... on computers, you're using both sides of the brain at once, very intensely. And that's one of the reasons why they think computers can be causing

problems... because you're using your right and left brain at such a high speed. Now there's chances we may be having an evolutionary development.

Z: Um hmm.

D: There are some people who think that we will become smarter because of that. You know you're talking about different studies.

Z: Well, when you run the brain that fast and that long on those computer screens, you know you use up all your neurochemicals – your brain chemicals – get depleted more quickly. But yeah, maybe there's an evolutionary purpose to it.

D: I think ... it's what we've been saying all along. There needs to be taken a look at why people are becoming less effective and I think if you ask any business person, they'll tell you people are becoming less effective. They're harder to coach and it's harder to find people who are normal.

Z: You know one thing I want to say ... good coaching is don't use your computers in the evening. Because that light from your computer screen keeps your brain firing and you're not able to close down and start making melatonin, which is the sleep hormone. So if you're having trouble sleeping, you need to shut down the computer and the email... you know especially now when it's getting dark earlier ... shortly after dinner time.

D: Fluorescent lighting...

Z: Within in a few hours ... two to three hours before bed you have to be off those computer screens.

D: One thing ... they did find an electronic game that was good for kids. I think it was called...

Z: Stimulated the brain in healthy...more healthy way.

D: ... dance revolution. I have it here someplace. I'll probably come across it. I wanted to give that to parents. I'll find it in a minute. It's towards the back.

Z: Okay, what else about the environment.

D: Music. Music is very important.

Z: That's why we have music on our show.

D: That is why we have music on our show. It fires the temporal lobes and it evens ... it evens it out. It's used in all kinds of therapy. And there are a lot of therapies being used, like music, lights, sound, etc., but they're too global. They're not specific enough. Just like we say the brain needs to be evaluated for which drug it takes, or which supplement it takes, or which treatment affects which. You need to know what affects certain musics. And they've done a number of studies. I saw one by Dr. Amen and I think rap music was way down...

Z: I can imagine.

D: Some people would disagree with that. Some people would ... in certain situations it might be ...

Z: Well, I'll tell you what. If you have a brain that's down ... low activity, you want stimulation, you're going to like rap music.

D: Very good. Excellent.

Z: If you're brain is firing in a healthy way, you want more like Mozart.

D: Yes. We talked about that last week and I think people should know that if you know somebody that has certain brain injuries, they stimulate themselves by creating stress. They get angry, they get you all worked up ...

Z: Create conflict.

D: Conflict... and by the time they're feeling good, everybody around them is ...

Z: Is dead! (laughter)

D: ... not so good. Okay?

Z: Run over.

D: And you're run over. And you know there are other ways of doing that. We have patients with head injuries and in order for them to look to the right they can't get enough energy in their cerebellum, they can't just move their eyes, they've got to move their head at the same time. They can't move one, they have to fire the cerebellum just to move their eyes.

Z: Um hmm.

D: So the body is very unique in that way that it will take in other systems and so a lot of times we do miss things. That's why you need to have a thorough exam the right way because they can be hiding certain problems and then when they finally show up as a serious problem, it's a little hard to take care of.

Z: And on the other side, if you have real hyper people, you know... they're over stimulated in their brain ... it's called the ring of fire. I'm sure Dr. Amen will also speak about that. They like to have some cocktails and some drinks because alcohol depresses the activity and they're firing too high. So people are really self-medicating.

D: Those are the criminal types, actually. He found that quite common in people who continually committed crimes, when you think common sense would keep them from doing that. Okay?

Z: Lots of different injuries can do that.

D: But back to music...

Z: Mm hmm.

D: Um... there are types of music and it even makes a difference which ear you play the music in. If you have a left temporal lobe problem you would want to wear ... you would want to hear the music in your right ear. And if you had a right temporal lobe injury you would want to hear it in your left ear.

Z: On the non-injured side?

D: Yeah, because the opposites ... all senses go to the opposite side of your brain except for smell. Smell goes directly inside. And smell doesn't go to the limbic, it goes into the frontal cortex and it has a lot to do with the limbic system and it makes people feel good. I had a person that I had them smell something the other day and they ...

Z: You have memory flashbacks.

D: No, I hit an acupuncture point and they smelled antiseptic.

Z: Hmm.

D: I haven't figured that out yet. But...

Z: And then they probably had the memory ... the recollection of where the antiseptic...

D: Yeah, it was a limbic...

Z: Yeah.

D: ... a limbic response. So we know their limbic system is a little sensitive.

Z: Um hmm.

D: We talked about light. So I think that's pretty good. Um... A lot of people in the shower in the morning worry a lot.

Z: Why are they worrying in the shower? That's our singing in the shower.

D: Well, some people.... they have a over ... their prefrontal cortex is so tired... they have their anterior singular gyrus is fired up ... and they have to go through this series of worrying things until they can fire their cortex up.

Z: Oh, that's the one where you get stuck in the same thought.

D: Yeah.

Z: In your anterior singular gyrus. People who are stuck ... they keep rerunning that tape over and over again.

D: It takes about 20 minutes for the pre-frontal cortex to wake up...

Z: To fire. So people who stand in the shower for a long time in the morning then finally feel better. Maybe they're stimulating that CEO of the brain.

D: You got it. Now I'm not going to talk about sex because Dr. Amen has a thing he wants to talk about that.

Z: Yeah, we'll save sex for next week.

D: Yeah, he can handle that. You know the signature of the wound of the Iraq war... you know ...

Z: A unique...

D: The war... okay?

Z: A unique.

D: Is brain trauma.

Z: Yeah, they say that because these guys are being around all this bombing, it's actually giving them a soft head injury, a brain trauma. They're coming back with brain injuries... not from being shot – physically shot – but from being around that bombing vibration.

D: Yes. Remember our body is aware of all sensory input. It has to modify it through the thalamus and through the cortex. And if it's just too much ... if it's more than it can handle ... something's got to give.

Z: Um hmm. And they're not able to think clearly; their sleep is interrupted; their concentration is poor.

D: You actually started destroying neurons. That's the bad part.

Z: It's like they get disconnected... the little vine from the fruit. It gets lost for a while. It takes time to heal that.

D: Here's an interesting thing about email is you can check your emails too much and it kind of makes you stupid.

Z: They can be addicting those emails.

D: Yes. People look – get addicted – they're looking forward to either the good news or the bad news, but they're wondering is there more news on my emails? Is there more news on my email? They almost ... especially if they have a basal ganglia and they want to be active... so they want ... their little hands will be typing away and answering. So emails have an addictive quality to them. And they can cause muddled thinking and poor performance if you spend too much time on the email. And there's been several studies to document that. So everybody out there listening, if you have an email in your office you better be checking the use because it has a harmful effect on their work and personal lives. Do you have anything you wanted to ...

Z: No, that makes sense. I'm just thinking about how addicting that is.

D: The last thing I want to say is protect your brain. You need to protect your brain from trauma. So if you're riding a bicycle, wear a helmet.

Z: And a helmet that fits. Not just one that's in the garage that belongs to somebody else.

D: I remember doing a triathlon where a woman cut in front of me and knocked me over good. And I cracked my helmet open. I was so ...

Z: You cracked your helmet open?

D: Oh yeah, I was very happy ... but I got on and finished the race of course.

Z: Did you pass her by? You must have.

D: I didn't... you know that's funny. You would think I would have gotten ...

Z: She should watch out.

D: I mean that's just what happens in triathlons. So you want to protect your brain from physical trauma. You want to figure... you want to protect yourself from ... we already talked a little bit about it, just I want to repeat it ... from toxic exposure. Okay?

Z: Um hmm.

D: Because there are many toxins around us... many household items... many things people are taking... that can cause exposure. And then there are foods that cause that ... exccytotoxin ... we should do a show on exccytotoxins and ...

Z: Um hmm. MSG and thansglutomate.

D: Far more ... anything that has a synthetic protein, like pea protein that's actually a ...

Z: Excuse me, pea protein?

D: Pea protein is an exccytotoxin.

Z: Can you say that again?

D: P-e-a

Z: P-e-a

D: Pea protein.

Z: Pea, like from peas?

D: Yeah. You'll see all these little short ... What happened is they used to just have these chemical names. And somebody got them to take this out of baby food – because they wouldn't do that. And what they did is they just changed the names and put it back in.

Z: Oh.

D: So our foods have a lot. So anything... anything that man made eat... anything that nature made, you should eat. Anything that man made ... look carefully at it.

Z: Yeah.

D: You know aspartame and that... they all ...glutamate, our body needs that for normal brain function, but it over ... it just gets way too much and then it starts firing way too fast.

Z: Yeah, basically eats up all the neurotransmitters in the brain.

D: And then sleep. Just good old sleep.

Z: Sleep is so important.

D: Now some people need more sleep than others. I don't need as much sleep as some people. I try and sleep, but I can't.

Z: You can't sleep because of that brain injury that you have. If we get that fixed ...

D: Which one? The football injury or the speed injury or the triathlon...

Z: Which millionth brain injury... You really need eight hours of restorative sleep. We cycle through sleep in 90 minute cycles.

D: I had advance treatments.

Z: We can get in fight over this sleep thing. Everybody thinks they don't need sleep. They do. It causes degenerative diseases.

D: What I was saying was giving everybody a chance ... there is a wide spectrum for people's...

Z: Let's put it this way. There's a wide spectrum of how much people are sleeping. That doesn't mean that's good for them.

D: Well, let's not have an argument here.

Z: Well, yeah. Really.

D: You like more sleep, I like less. Okay.

Z: (laughter)

D: Video games... we talked about that ...

Z: Hey, if you want to look old, that's up to you.

D: You know they're changing ... they're changing the driving age in most of the states to 21 I think. It's going up. No, 16... it's going to 18.

Z: I was going to say 21 to drive.

D: To 18 because of the fact that they can't make decisions. You know...

Z: Their judgment isn't developed yet.

D: ... insurances change at age 25. The reason they do that is because that's when the frontal cortex and limbic system becomes developed... supposedly.

Z: So you can drive at 16. You can get married at 18.

D: You can go off to war at 18.

Z: Off to war... Can't drink until you're 21 and you can't get really good rates on your driving insurance until you're 25... when you're brain is finally developed.

D: Here's that ... it's called Dance, Dance Revolution. The game I was telling you about.

Z: The healthier video game?

D: Yes, it uses coordination exercises mixed with aerobics and a video game format.

Z: So they're actually moving and doing the video game at the same time. Instead of sitting there numb...numbly taking the stimulation.

D: There's another good game called "Journey to the Wild Divine"... not divide, but divine.

Z: Where do they get these movies? Is there a website mentioned?

D: Yeah, www.wilddivine.com.

Z: www.wilddivine.com.

D: And...

Z: Probably start there anyway.

D: I can't find the other one.

Z: I bet if you go to www.amenclinics.com you can find some more information.

D: Well I'm sure they would. You could email and they'd get that for you.

Z: Sure.

D: Okay the last area we want to cover ... we've got a minute before break ... is just the drugs, okay?

Z: Umm hmmm.

D: Smoking is bad for your brain; coffee is bad for your brain ... it really is very bad ...

Z: Drugs are bad for your brain.

D: Alcohol is the worst ... and it destroys the brain and makes it... destroys cells and makes big holes in your brain when you do testing. Obviously... the obvious one ... marijuana causes irr... damage to the temporal lobes... short term memory loss.

Z: Um hmm.

D: Talk to anybody who's using marijuana, even if they're using it for health conditions, they are going to have short-term memory loss.

Z: And cocaine. That eats up your brain too. It's a stimulant.

D: I wanted to make sure we pointed out the ones that people think are good... like coffee and smoking – I guess we don't think smoking anymore. And then Prozac... I think people have seen how they know Prozac...

Z: Very dangerous.

D: ...can cause people to shoot people.

Z: Well the thing is ... if you ... if you're giving prozac for the part of the brain that's down that responds to Prozac, it seems to be effective. But if you give it for a part that's not down, it has ... you know suicidal tendencies.

D: Well that's why we said you need to have a thorough examination so you know what part of your brain is affected. We know sometimes we're not healthy. But then they take a shotgun approach to the medication.

Z: Mm hmm. You can be much more specific. We're going to talk with Dr. Amen next week on these spec scans. So come on back to hear more about Dr. Amen being with us next week. This is AM 950 Air America Minnesota.

(music)

(music)

D: Welcome back to the Big Brain Radio Show. We thought we'd put a little prefrontal, cognitive stimulation there...

Z: Okay and that is...

D: Ten Years After at Woodstock.

Z: Who's the artist?

D: Ten Years After.

Z: Oh (laughter). Okay. I thought it was Jimmy Hendrix. I thought I was gonna have one here.

D: Actually, he's next on the album but we wouldn't ...

Z: All right.

D: All right. So now we're in our favorite portion which is called stuff that works. And of course since we're talking about the brain we're going to talk about stuff that works for the brain. And I think Dr. Z you said your favorite thing for the brain and stuff that works is ...

Z: Fish oil.

D: Fish oil. And mine is a stimulation to the nervous system. The brain needs three things. It needs oxygen, and it gets that from your blood flow so exercise would therefore be very important to you. Now let's talk about exercise because some people have some still outdated ideas about exercise. Aerobic exercise is what gets the blood moving in your body, and it actually gets you in a ... where you're using oxygen, but it can go to a too great a degree. Do you want to say something about that?

Z: Well, from my point of view, the problem with cardio exercise is that if you're not healthy enough to do it, or young enough to do it, it pushes you into a cortisol reaction. And then the cortisol stimulates insulin and you get this vicious metabolic syndrome happening. Much better to do weight training and build up lean body mass. But I'm not sure what exactly you mean from a brain point of view.

D: Well from a brain point of view it does ... you do need exercise... it is helpful. But it is what you said... when people are not healthy ... and a

lot of people are not healthy metabolically.... their systems are not working so the same old thing doesn't work for them. So they used to go do the 20 minutes of exercises, now they're doing an hour of intense... of aerobics of some kind, and it doesn't do the job... it's actually wearing them down making them want to do more and more. The same as they do with coffee and other types of substances that at one time may have worked for them but don't anymore.

Z: You know the good old 10 minute walk or 20 minute walk, is really the best.

D: I was going to say 20 minutes, right.

Z: Yeah. There's research now that if you do three 10 minute sections a day, that's equally or more valuable and effective than a 30 minute way all at once.

D: Well one of the things that we're doing with our makeover patients is we are starting to improve their metabolism first ... get them functioning with stimulation to the nervous system. And the third thing the body needs is glucose and that's not sugar folks. That's your body's breakdown of carbohydrates. And once it can get there and get healthy by the right diets without anything interfering, then you can do more things to make your life feel better and experience it better. In fact, we always say that healthy people make healthy decisions. And you start doing things much much better. So we've got exercise, we've got eating properly and we've talked about that a lot on this show... and we think that is another thing that stuff that works. And if you're interested in finding out more, I think Zena you have a seminar coming up, right?

Z: Yeah, I just want to let people know you can actually register for my seminar online now. If you go to [www.keepthezestforlife](http://www.keepthezestforlife.com) ... just like it sounds ... keepthezestforlife.com ... you can register on line for my seminar on the Saturday after Thanksgiving from 1:00-5:00 ... we're going to go over everything that makes your metabolism healthy, talk about your hormones, talk about how to eat. You'll walk away from that day with some knowledge ... I think you will appreciate ... that you can use for the rest of the year.

D: Rest of your life.

Z: The rest of your life, that's right. So ... register...

D: If anybody is interested in having a neuro evaluation to see how their brain is working, we can do that at my clinic and it's ...

Z: The Center of the Universe in Uptown Minnesota.

D: Uh huh... at kenwoodchiropractic.com. DrStussy@kenwoodchiropractic.com. If you have any questions... just from the history alone we do a thorough ... about a 20 minute history just on how your brain functions. So anyway...

Z: Let's talk about next week too because Dr. Amen's going to be here. Let them know who Dr. Amen is Dr. D.

D: Well, we've talked about him. He's ...

Z: He's a neuro psychiatrist.

D: Right. He's the most outstanding expert in the area of evaluating the spine using objective evaluation which he uses a spec scan. But I think the thing about Dr. Amen is his passion and his ability to explain and talk about the brain and the health and put it in terms of what we need.

Z: And he's very charismatic and personable. You'll enjoy hearing his point of view.

D: Once you've heard this ... and I hope ... I hope some individuals out there have gotten this ... If you've done anything – or are doing things – that impair with your brain such as alcohol drinking, things to excess, you'll never be in touch with who you really are. You will not get to experience your real self.

Z: Never is a long time. But you know, you're really compromising continually your self-expression.

D: No. If you are doing something to interfere with your brain function, that part of your brain will never become known. It can't show up. And I know that sounds kind of final, but Dr. Amen agrees with me, and so

people need to know that their potential lies in their brain, not just in being ... looking strong and having nice looking muscles.

Z: So he's going to be here. He's going to talk about sex and the brain. He's going to talk about this testing that we keep talking about. And give you a lot more information on how to have a healthy brain and how to avoid diseases of aging.

D: So what else do we want to talk about?

Z: Well, let's see.

D: We have ... coming up we have a psychologist by the name of Jill Marx. We have Greg Stanley, who's an expert on money and thinking, and he has a very interesting concept called counter-intuitiveness. We have our makeover, which is going great.

Z: Yeah, the people in our makeover ... we want to thank them for participating. They're going to be on the show. They want to talk to you all and tell you some of the interesting things that are happening to them.

D: And they are great people and they are doing great. They're just ... they're star patients, right?

Z: They really are doing a great job. This is not easy. I mean it's simple, but it's not easy to change your life.

D: And you know...

Z: Oh! Which brings up... if you want to change your life, come to our Big Brain Breakthrough, December 10th and 11th. Dr. DeMartini will be here.

D: This is a metaphysical and a physical breakthrough. You can register online at our website which is ...

Z: bigbrainradioshow.com

D: Or you can contact Kris at 952-935-8099 and we have a money-back guarantee with this.

Z: If you complete the course.

D: If you complete the course.

Z: And you haven't had amazing breakthroughs.

D: And usually if you decide you don't want to do it the reason you decide not to do it is probably the reason you should do it.

Z: So you can find out more about Dr. DeMartini. We thank you for being here. It's been another great Saturday on the Big Brain Radio Show.

D: Yeah, email us if you've got any input. Thanks to Marty, Diana, the crew at Air America. You can listen to us on www.airamericaminnesota.com, if you want to listen on computer at the same time. And ... thank everybody. Thank your big brains that you used to know, that you do know and the ones you're going to know.

Z: Thanks for listening. Listen in again next Saturday. 11:00. This is AM 950 Air America Minnesota.

(music)