A Newsletter Dealing with Obsessive Compulsive Disorder

# NEVER say NEVER



In the midst of the seemingly endless storm, look to the promise of the rainbow the rain shall not prevail!

Summer 2018

# The Science of OCD

ver the years, we have addressed within these pages many different aspects of OCD. We have certainly focused on the different manifestations of OCD and the various ways it can be treated. We have looked at Cognitive Behavioral Therapy (CBT) in its many alphabetic forms, including ERP, ACT, DBT, and Mindfulness. We have looked at OCD and the Family and OCD in Children, at the Inspirational and the Humorous. But where does OCD come from? What is happening in the brain that causes these bizarre thoughts and behaviors in some but not others? Is there something in our DNA that predisposes us to this baffling and debilitating disorder?

In this issue of *Never Say Never*, we look at the biological mechanisms in our brains and in our genetics that are thought to play a role in Obsessive-Compulsive Disorder.

# Fall Program Sunday, October 28, 2018

**"OCD in Children."** Treatment for OCD is difficult enough for mature adults. Young adults and even teenagers can also manage it with a pretty fair understanding of what is required and why it takes the form it does. But what about young children, especially pre-school and elementary age children? Parents face particularly difficult challenges and must learn ways of dealing with an OCD child that may seem counter-intuitive to them. How can they best support their child, and how do treatment professionals address the needs of the very young? Noted child therapist and author Natasha Daniels, LCSW, will join us via Skype from Arizona to answer these questions for us. Parents, don't miss this timely and important program. Join us on Sunday, October 28, 2018, 1:00 at Beaumont/Botsford Hospital in Farmington Hills. Get all the details on our website, ocdmich.org, or call 734-466-3105.

NOTE: THIS PROGRAM IS ON SUNDAY, NOT SATURDAY

### THE OCD FOUNDATION OF MICHIGAN

P.O. Box 510412 Livonia, MI 48151-6412 Telephone (voice mail): (734) 466-3105

E-mail: OCDmich@aol.com

Web: <u>www.ocdmich.org</u>

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#### NEVER say NEVER

is the quarterly newsletter of The OCD FOUNDATION OF MICHIGAN, a 501(c)(3) non-profit organization.

Please note that the information in this newsletter is not intended to provide treatment for OCD or its associated spectrum disorders. Appropriate treatment and advice should be obtained directly from a qualified and experienced doctor and/or mental health professional. The opinions expressed are those of the individual authors.

To submit articles or letters, write or e-mail the OCDFM at the above addresses.

### LIST OF SELF-HELP GROUPS

#### ANN ARBOR:

1<sup>st</sup> Thursday, 7-9 PM St. Joseph Mercy Hospital Ann Arbor Ellen Thompson Women's Health Center Classroom #3 (in the Specialty Centers area) 5320 Elliott Drive, Ypsilanti, MI Call Bobbie at (734) 522-8907 or (734) 652-8907 E-mail <u>OCDmich@aol.com</u>

#### **DEARBORN**:

2<sup>nd</sup> Thursday, 7-9 PM First United Methodist Church 22124 Garrison Street (at Mason) In the Choir Room (enter under back stairs) Call Bobbie at (734) 522-8907 or (734) 652-8907 E-mail <u>OCDmich@aol.com</u>

#### FARMINGTON HILLS:

1<sup>st</sup> and 3<sup>rd</sup> Sundays, 1-3 PM BFRB Support Group Body-Focused Repetitive Behaviors Trichotillomania and Dermatillomania (Hair-pulling and Skin-picking) Beaumont Hospital Botsford Campus Administration & Education Center, Classroom C 28050 Grand River Ave. (North of 8 Mile) Call Bobbie at (734) 522-8907 or (734) 652-8907 E-mail <u>rslade9627@aol.com</u>

#### GRAND RAPIDS:

Old Firehouse #6 312 Grandville SE Call the Anxiety Resource Center (616) 356-1614 www.anxietyresourcecenter.org

#### Anxiety Disorders

Meets every Wednesday, 4:30 to 5:30 pm and 7 to 8:30 pm (two groups offered at this time to keep group size smaller) A weekly support group open to anyone who has an anxiety problem (including trichotillomania and Obsessive-Compulsive Disorder).

#### **Teen Anxiety Disorders**

Meets every Wednesday, 4:30 to 5:45 pm A weekly support group open to teens aged 14-18 who have an anxiety problem.

#### **Open Creative Time**

1st Wednesday, 6:00 to 7:00 pm Take your mind off your worries by being creative. Bring a project to work on or enjoy supplies that are available at the ARC.

#### **Social Outing Groups**

Offered once a month. Dates and times change. Check the ARC website for current listings.

#### *LANSING*:

1st Monday, 7-8:30 PM Delta Presbyterian Church 6100 W. Michigan Call Jon at (517) 944-0477 E-mail jvogler75@comcast.net

#### LAPEER:

2<sup>nd</sup> Wednesday, 7:30 - 9 PM
Meditation Self-Healing Center
244 Law St. (Corner of Law & Cedar Streets)
Call Mary at (810) 441-9822

#### <u>PETOSKEY</u>:

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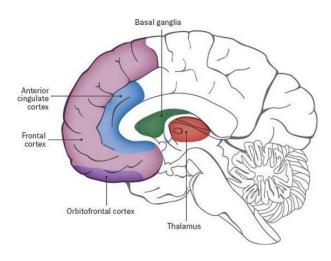
#### <u>ROYAL OAK</u>:

1<sup>st</sup> Wednesday, 7-9 PM Beaumont Hospital, Administration Building 3601 W. Thirteen Mile Rd. Use Staff Entrance off 13 Mile Rd. Follow John R. Poole Drive to Administration Building Park in the South Parking Deck Meets in Private Dining Room (If the building is locked, press the Security button next to the door, tell them you are there for a meeting, and they will buzz you in.) Call Terry at (586) 790-8867 E-mail <u>tmbrusoe@att.net</u>

# **Obsessive-Compulsive Disorder: The Biology**

by Bill White

(*Editor's note: This article appeared on Bill White's website Chipur on April 5, 2011, and can be found here: <u>chipur.com/obsessive-compulsive-disorder-the-biology</u>. rws)* 



"I can't stop counting! This is just nuts. Stairs, ceiling tiles, window panes, adding-up license plate numbers – it never ends. I don't understand. Why is this happening to me?"

Yesterday we began a long overdue series on *obsessive-compulsive disorder* (*OCD*). In that article I shared a ton of information regarding what it is and what it looks like. It's a must-read, so <u>click here</u> to check it out.

Today we're going to chat about the biology of OCD. Lots of good stuff, so let's get busy...

### **OCD Anatomy & Physiology**

Major brain-anatomical players in OCD include the *orbitofrontal cortex*, *basal ganglia*, *caudate nucleus*, *cingulate gyrus*, and the *thalamus*.



In the image to the left, the right arrow points to the orbitofrontal cortex. The left arrow handles the basal ganglia. The caudate nucleus lies within the basal ganglia and the cingulate gyrus extends above it. The thalamus lies immediately south.

Here's how it's thought to play-out. The thalamus is processing incoming sensory messages. The caudate nucleus is doing some filtering before opening the gate, which will allow messages to hit the cerebral cortex for a bit of reasoning-seasoning.

But this time around there's an air of discomfort and misunderstanding. The basal ganglia and cingulate gyrus are indicating there's trouble on the scene, but for the cortex it's business as usual – even though it has a hunch something's up.

At this point, the cingulate gyrus, which aids in shifting attention from one thought or behavior to another, freaks-out. As a result, it gets stuck on certain thoughts (obsessions) or behaviors (compulsions).

(Continued on page 5)

**Obsessive-Compulsive Disorder: The Biology** (Continued from page 4)

Yes, it's the cingulate gyrus that tells someone enduring OCD that something unpleasant will happen if obsession-generated compulsions aren't acted upon. And the mission is simple – providing relief for intense feelings of anxiety.

### **Genes & Things**

It's been discovered that a possible genetic mutation may be a factor in OCD. The gene involved is *hSERT*, the serotonin transporter gene. By the way, it's believed that decreased levels of serotonin due to under-stimulated neural serotonin receptors plays a major role in OCD.

The *Met158 variation of the COMT gene* is also receiving research attention. The COMT gene produces an enzyme that breaks down *dopamine*, weakening its signal. People with this gene can't seem to tear themselves away from something arousing, even if it's potentially harmful.

Family members of individuals diagnosed with OCD are at greater risk for developing the disorder, as well as tic disorders, than the norm. It seems as though childhood-onset OCD runs in families more than adult-onset. It's also more likely to be associated with tic disorders.

Curiously, it isn't a cinch that identical twins will share OCD. So that means environmental factors play a role.

Finally, it's the disorder that runs in families, not specific obsessions and compulsions. For example, one family member may be a washer/cleaner, the other a counter.

Bottom line: Genetic factors account for 45-65% of OCD symptoms in children diagnosed with the disorder.

### **PANDAS: Fascinating Stuff**

I want to briefly mention something known as *Pediatric Autoimmune Neuropsychiatric Disor*ders Associated with Streptococcal Infections (PANDAS).

Let's say a child has been diagnosed with OCD or a tic disorder. His/her symptoms suddenly ramp-up after a bout with strep throat. Also presenting may be moodiness, irritability, disturbed sleep, hyperactivity, inattention, and joint-pain.

The child's situation would be placed within the PANDAS spectrum.

Scientists don't fully understand the phenomenon, but it may have something to do with the dynamics of an autoimmune disorder. And this appears to be a logical place to start because the

(Continued on page 6)

**Obsessive-Compulsive Disorder: The Biology** (Continued from page 5)

onset of the autoimmune disorder rheumatic fever follows an episode of strep throat.

It's thought to go like this. Instead of attacking strep bacteria, antibodies go after the heart valves, joints, and specific regions of the brain. This occurs because the proteins of the strep bacteria's cell wall are similar to the proteins of the anatomy just mentioned. The dynamic is known as molecular mimicry.

So how does this errant attack business bring on OCD and/or tics? Well, it seems the basal ganglia are victimized by PANDAS. And, as we've learned, the basal ganglia are deeply involved in the presentation of OCD.

Bill White is the founder and producer of Chipur.com, a website encompassing diverse subject matter, including pieces on the biology and psychology of depression, anxiety, and bipolarity.

# OCD – A Biological Perspective (Part 1)

by Carol Edwards

(Editor's note: This article appeared on Carol Edward's website Your OCD Study Coach on October 27, 2017, and can be found here: <u>yourocdstudycoach.com/2017/10/27/ocd-a-biological-perspective-part-1</u>. Part 2 addresses the Psychological Perspective and is not included here. That article can be found at <u>yourocd-studycoach.com/2017/06/15/ocd-a-psychological-perspective-part-2</u>. rws)

According to scientific research, coupled with clinical interventions, obsessive compulsive disorder (OCD) is considered to share both biological and psychological factors. The first part of this article explains briefly the biology of OCD. This includes a review on certain areas of the brain which show how particular structures in the basal ganglia seemingly play a role in this disorder. The second part explains how psychology plays a part and how thinking errors attached to intrusive thoughts link to faulty beliefs which compound and strengthen the symptoms. It further demonstrates how cognitive behavioural therapy with exposure response prevention – a scientifically established based therapy – is able to correct the disorder at a bio-behavioural level.

#### The Basal Ganglia

Let's first look at the brain parts that seem likely to play a role in OCD:

- The *orbito cortex*
- The *cingulate gyrus*
- The *amygdala* (this is included as one of the basal ganglia due to its anatomical proximity, although properly it is part of the limbic system, important for emotions, instincts and desires)
- The thalamus
- *The striatum* which has two parts and therefore collectively known as the *neostriatum*.

#### Orbito cortex, cingulate gyrus and the amygdala

The *orbito cortex* and the *cingulate gyrus* are interactively involved whereby the first stores the value of things as good or bad and the latter signals that something doesn't feel right (Prof. F. Toates). Further, the *amygdala* puts us in that "fight or flight" situation when, for example, fear or danger faces us.

#### The Thalamus

The thalamus acts as a kind of "relay station" whereby motor and sensory information (except smell) are re-

(Continued on page 8)

#### OCD - A Biological Perspective (Continued from page 7)

ceived by it and projected to the *cerebral cortex* (Arthur S. Reber.) The cerebral cortex is responsible for the so -called "higher-mental processes" of language, thinking and problem solving (Reber). Given the nature of its role, it makes sense how the *thalamus* loops the same information to and from the cerebral cortex in those who have obsessive compulsive disorder (OCD).

#### The Striatum

The *striatum* transmits information involved in thinking, automatic filtering and movement (Reber). This part of the brain exists as two identical cell types which are known as the:

- Caudate nucleus for controlling automatic thinking and filtering and the
- *Putamen* for controlling automatic movement

#### How do these brain parts cause obsessions?

**Example:** When "Lucy" brushes past someone, she experiences a sudden and fearful intrusive thought that she's been infected with a <u>sexually transmitted disease</u> (STD).

#### Let's look at what happens here.

Lucy's *orbito cortex* interacts with the *cingulate gyrus* to signal that something is wrong. An additional interactional signal involving the *amgydala* puts Lucy in a "fearful" situation. Her response is to repeatedly decontaminate without delay. This response shows that Lucy has developed a contamination obsession. Her corresponding compulsion (de-contaminating) acts as an irrational attempt to remove the "disease" or "dirty" sensation and to relieve anxiety momentarily.

#### What is the outcome?

In this example (and in all subtypes of OCD), the transmission that involves automatic thinking, filtering and movement (*neostriatum*) has become affected. As such, the network of interacting brain regions become locked (J.M. Schwartz). So after de-contaminating Lucy is less able to move to another thought/behaviour automatically because her thoughts loop the same information, hence further attempts to decontaminate.. [1]

#### Is it true that everyone get intrusive thoughts?

Studies show that mostly everyone gets intrusive thoughts from time to time. [2] However, obsessions are much stronger since these are rooted in the brain and repeatedly appear in the person's consciousness without their will, causing intense fears. Put simply, obsessions are classed as intrusions that are activated and driven on a biological level, and therefore termed a psychiatric disorder.

(Continued on page 9)

OCD - A Biological Perspective (Continued from page 8)

# The question still arises, if everyone gets intrusive thoughts, does this mean that all people to some degree have OCD?

On the contrary, it would seem that people who aren't vulnerable to OCD may become fleetingly aware of intrusive thoughts but these are automatically filtered out via the *caudate nucleus*, and so alarm bells probably don't even get the chance to ring. In this respect, the person doesn't suffer from obsessions and for that reason isn't affected by the fear and anxiety associated with those who have OCD; as a result, and following an intrusive thought, they move directly to another thought/behaviour with little or no concern (see *neostriatum*).

#### Summary

The interacting parts of the brain that cause OCD become locked. Subsequently, sensible reasoning gets confused. What follows are attempts to correct the obsessional problem with a corresponding compulsive behaviour (emotional response).

#### Source

- [1] Brainlock by Jeffrey M. Schwartz, M.D. with Beverley Beyette covers a cognitive bio-behavioural approach that can help you free yourself from obsessive-compulsive disorder.
- [2] Radomsky and his colleagues found that the thoughts, images and impulses symptomatic of obsessive compulsive disorder (OCD) are widespread. "Almost everyone has these kinds of thoughts. They're normal, and they're a part of being human," Radomsky said. For people who suffer from OCD, this knowledge "can be incredibly helpful to change the meaning that they ascribe to the intrusive thoughts." <u>http://trunk.bps-rs-uat3.steamdesk.com/news/many-people-have-obsessive-thoughts</u>

Carol Edwards is an <u>accredited</u> CBT therapist/coach who specialises in OCD and related problems. Her website is Your OCD Study Coach at <u>pureocdtherapist.com</u>. Part 2 of this article can be found at <u>yourocdstudycoach.com/2017/06/15/ocd-a-psychological-perspective-part-2</u>.



"Never fear the shadows, they simply mean there's a light shining somewhere nearby."

### Learn to Love Your Amygdala

That panic button in your brain is operating just as intended.

by Reid Wilson, PhD Posted July 3, 2018

Your mind has a brilliant capacity to respond to threat instantly and subconsciously. If you think of your brain as a high-functioning control board, receiving and distributing information at an almost inconceivable rate of speed, then the amygdala is the ESC key. *Escape! Control-Alt-Delete!* 

In an *Avengers*-esque summer blockbuster, the amygdala is that bright red panic button at the far corner of the control panel, shielded by a clear plastic casing that Robert Downey Jr. must smash open with the butt of a fire extinguisher before the earth is demolished by [insert super villain here].

In reality, the amygdala is a pair of almond-shaped emergency responders, each of them about an inch long. No protective cover. No barrier whatsoever. The two of them just hang out in the midbrain, exposed in the temporal lobe with all of the other controls of the limbic system: the hippocampus button, which forms long-term memories; the cingulate gyrus switch, which regulates aggressive behavior; and the dentate gyrus knob, which regulates happiness. The amygdala is working in the background, constantly monitoring for answers to: "Am I safe?"

As you go about your daily life, you're constantly receiving data from the outside world. This data enters the brain via the thalamus—a structure sitting on top of your brain stem that both processes and transmits sensory input. If the data received is potentially threatening, the thalamus tosses it over to the amygdala. The amygdala analyzes the perceived threat, deciding just how threatening it might be and how much epinephrine (think: adrenaline) is needed to deal with it. The amygdala pages the hypothalamus; the hypothalamus texts the adrenal gland; the adrenal gland sends an email confirmation; and after that series of split-second exchanges, epinephrine is tweeted (or, rather, secreted).

This is how you're able to experience a fear response within milliseconds of any perceived threat. It's instantaneous. You have averted disaster yet again.

The amygdala commandeers the entire brain and every major system of the body to respond to threats. If you begin to slip on the ice while walking, or see something slither in front of you on the path, this magnificent and spontaneous first responder will jump into action. Thanks to the amygdala, you can now manage this potentially threatening situation, whatever it may be.

As you peel back the layers and begin to understand the chemistry behind your worries, you may develop a love -hate relationship with your amygdala. Much like a beckoning carton of ice cream in the freezer, the amygdala simultaneously comforts and aggravates. But like all components of our minds and bodies that play some part in our anxiety, the amygdala is doing precisely what it's supposed to do. It's behaving impeccably, as a matter of fact. And for that alone we should be thankful.

#### Dear amygdala,

Thank you for playing such a crucial role in making me a huge, worry-making machine. I really appreciate you. As much as I resent you.

Love, Me

(Continued on page 11)

If there's one thing we all have in common, it's that every one of us has survived a life-threatening car backfire. That "POW!" sounds quickly and unexpectedly. In instances like these, the amygdala receives incoming data (the auditory "POW!") and immediately instructs the body to assume a guarded state. "Escape mode!" We turn without thinking, seeking the source of the explosion. We cover our heads. We overreact. We might even stumble forward and crouch close to the ground, shielding ourselves from stray firework shells and imaginary bullets. And then we feel like total idiots when we realize that the perpetrator behind this near-death experience was an old Ford with a clogged fuel filter.

Still, the amygdala is doing precisely what it's intended to do. And it deserves our appreciation.

This characteristic is more than human nature; it's also universal in the animal kingdom, in the world of predator and prey. Somewhere on the open savannahs of Africa, an impala explodes into a spectacle of zigzag leaps to confuse and outrun the claws of a cheetah. Once the cheetah gives up the chase, the impala will shake and tremble to release the leftover bodily tension after narrowly escaping death. Then it will gracefully dash off to rejoin the herd. Don't we act just as quickly when a car backfires? Or when the plane we're riding experiences sudden turbulence? That response is ingrained in us.

We can call this arousal of the amygdala the fast-track method. When the car momentarily loses traction as it hits ice, we are thrust into emergency response mode before we even have time to think, "Holy crap, here comes the ditch!" That's the shortcut to the amygdala via the thalamus. It's the amygdala functioning at its finest, in both worriers and non-worriers alike. Whether you consciously observe it or not, you probably employ the fast-track method on a daily basis.

New Yorkers know this reaction well. Any New Yorker can easily recall at least one experience of stepping on an uneven subway grate. Walking through Times Square, the metal grill beneath you suddenly sways and shifts and sinks perhaps an inch into the sidewalk, but it still gives you the impression for one fleeting second that you're going to fall straight through the ground and onto the gritty train tracks below. And for the next month or so, you step over or around every grill, grate, plate, or manhole cover you encounter. Your amygdala has a new built-in message: "This may be unstable, and I could fall through. DANGER!"

Since the amygdala's motto is "better safe than sorry," we all will be on the receiving end of plenty of false positives, reacting as though threat is present when no real threat exists. So we'll hesitate when approaching another subway grate—just so the amygdala doesn't allow us to unknowingly step on a faulty grate, fall through that hole in the ground, and become a permanent fixture of Times Square's subterranean transit system.

As we have an increasing number of false positive experiences, the amygdala will learn that encounters with uneven subway grates are pretty rare—and falling through one is nearly impossible—and eventually it will back down to its pre-grate encounter state. How do we get our amygdala to quiet down? Well, we place it into a safe, reasonable facsimile of the scene in which we were frightened, and we let it hang out. Every time you step on a subway grate and don't fall through the sidewalk, your amygdala takes in new information and learns to differentiate this very common occurrence from that one scary encounter.

This system works pretty darn well—that is, of course, unless we continue to tell ourselves that a threat is eminent. We'll address this tendency to "talk ourselves into worrying" in the next installment.

**Reid Wilson, Ph.D.**, directs the Anxiety Disorders Treatment Center in North Carolina, teaches at the University of North Carolina School of Medicine, and is the author of **Stopping the Noise in Your Head**. His website, <u>anxieties.com</u>, and his YouTube channel, <u>youtube.com/user/ReidWilsonPhD</u>, are incredible resources for all things anxiety- and OCD-related.



# FOUND ON THE INTERNET



By Angus Chen NPR Health Shots Health News from NPR October 17, 2017

People who have obsessive-compulsive disorder can get trapped inside a thought. It repeats itself, like a stuck song. Did I lock the door? Is that doorknob clean enough to touch? I better wash my hands again — and again.

The biology underpinning this loop remains murky to scientists, but scientists are beginning to sniff out potential genetic factors behind OCD and shed light on how the disorder affects the brain.

Research <u>published</u> Tuesday in *Nature Communications* identifies four genes with the strongest links to OCD to date. ...

*Editor's note:* This article from NPR Health News provides an excellent overview of this 2017 study, and can be found at:

www.npr.org/sections/health-shots/2017/10/17/558300775/search-of-genes-in-dogsmice-and-people-finds-4-linked-to-ocd.

## The One Sure Way to Stop Anxious, Depressing Thoughts

by Debbie Hampton

(Editor's note: This article appeared on Debbie Hampton's website <u>The Best Brain Possible</u> on July 23, 2017 and can be found here: <u>thebestbrainpossible.com/stop-painful-negative-thoughts-brain-depression-anxiety</u>)

We've all been told at one time or another – probably far too often – "Just let it go."

I'm sure the person offering this well-meaning sentiment intended to help. However, "Let it go" is bad advice – and almost impossible to do – when it comes to those pesky recurring painful or negative thoughts.

#### We All Have Repetitive Thoughts

There's some debate about how many thoughts humans average per day. Most of the information I've seen estimates that it's around ten thoughts per second or somewhere between 60,000 - 70,000 thoughts per day. No matter what the actual number is, I think we can agree that it's a lot! I would also venture to say that a large majority of those thoughts are about what went wrong, what is wrong, or what can possibly go wrong.

<u>Research</u> shows that there's a predictable pattern of neurological activity that's your brain's go-to state when it's at rest, not focused on anything in particular, or actively engaging with its environment. This resting state of your brain is called the <u>default mode network</u> (DMN). Science discovered the DMN using fMRI studies where people were asked to lay in the scanner with no specific thinking assignment. The scans showed that their mindless mental activity was mostly made up of repetitive ruminative thoughts.

There's not a complete consensus yet on exactly which parts of the brain are involved in <u>the DMN</u>. The brain regions generally included are the medial prefrontal cortex, posterior cingulate cortex, and the inferior parietal lobe.

I'm sure you're familiar with ruminating thoughts – even if you don't call them that. Worrying is ruminating. Replaying the pain of the past is ruminating. It's when your mind grabs hold of something and goes over and over it without any productive outcome. It's exhausting, stressful, and no fun at all. <u>Studies</u> confirm that people who spend a lot of time ruminating are much more likely to develop mental health problems such as depression, anxiety, and PTSD.

#### Why "Let It Go" Doesn't Work

When you try to let thoughts go, you have to turn your attention and energy to those pesky thoughts. In your brain, because of <u>neuroplasticity</u>, what you repetitively focus on changes your brain causing neuronal pathways to form and strengthen. The stronger the connections are in your brain — the more you engage in

(Continued on page 14)

The One Sure Way (Continued from page 13)

the thoughts you're trying "let go." And the more you ruminate, the more firmly the thoughts get wired into your brain.

It's a feedback loop. In other words, by focusing on the thoughts to let them go, you're reinforcing them.

To try to let thoughts go also asks you to actively do something with them — for which you will probably judge yourself harshly when you can't do it successfully – and almost all of us won't be able to most of the time. To let go of negative thoughts asks you to wish for reality to be different from it is. This kind of thinking always causes struggle and pain. It's the opposite of <u>acceptance</u> and <u>mindfully working with</u> <u>"what is."</u>

#### "Let It Be" Instead

Just like Paul McCartney sang, I'm going to advise you not to "let it go", but simply "let it be."

You don't have to fight with your thoughts, make them go away, or do anything with them at all. Just let them be. Accept them, and don't give them any more of your attention than necessary.

Accepting the thoughts is not the same thing as agreeing with or believing them. To accept them means to just let them exist without investing meaning or importance in them, or judging them or yourself for having the thoughts. Mindfully observe the thoughts and realize they really have nothing to do with who you are.

I've heard it explained with the following analogy. Imagine that the thoughts are unwanted guests that show up at your house one night when you're throwing a dinner party. Like any good host, you open the door when the doorbell rings to find them standing there. You don't have to be ugly, slam the door, and make a scene. That would disrupt the party and your mood. They're already there. Let them come in. However, you don't have to spend your time and energy making sure they're comfortable, refreshing their drinks, and making polite chit-chat with them.

They're just there. Hanging out. Ho hum. They're not interesting or even worthy of your attention.

#### How to Stop the Negative Thought Loop in Your Brain

You have to interrupt the rumination cycle by activating different neural networks in your brain. You do this by consciously shifting your attention. When you actively focus your attention on something besides the thoughts in your head, your brain's <u>task-positive network</u> (TPN) gets activated. The TPN is made up of the lateral prefrontal cortex, anterior cingulate cortex, insula, and somatosensory cortex.

The TPN is engaged when you're focused on the here and now, which is mindfulness. Here's the se-

(Continued on page 16)

# Neuroplasticity: Are You Making A Masterpiece or Mess of Your Brain?

#### by Debbie Hampton

(Editor's note: This article appeared on Debbie Hampton's website <u>The Best Brain Possible</u> on Sept 10, 2014 and can be found here: <u>www.thebestbrainpossible.com/masterpiece-or-mess</u>. rws)

In every moment of your life, every single thing of which you are aware – sounds, sights, thoughts, feelings – and even that of which you are not aware – unconscious mental and physical processes – are based in and can be directly mapped to neural activity in your brain. What you do, experience, think, hope and imagine physically changes your brain through what is called experience-dependent neuroplasticity. The neurological explanation of how this happens is complicated, but the basic concept is simple: every minute of every day you are shaping your brain. The question is: What are you making? A masterpiece or a mess?

In his book, <u>Just One Thing: Developing a Buddha Brain One Simple Practice at a Time</u>, Rick Hanson describes how to undertake the process of "developing a buddha brain one simple practice at a time." The book outlines 52 brief actions a person can do several times a day to craft a brain that is less stressed, happier and more resilient with a deeper sense of well-being.

Hanson writes:

There's a traditional saying that the mind takes the shape it rests upon; the modern update is that the brain takes the shape the mind rests upon. For instance, if you regularly rest your mind upon worries, self criticism, and anger, then your brain will gradually take that shape – will develop neural structures and dynamics of anxiety, low sense of worth, and prickly reactivity to others. On the other hand, if you regularly rest your mind upon, for example noticing you're all right right now, seeing the good in yourself and letting go...then your brain will gradually take the shape of calm strength, self confidence, and inner peace.

#### How Neuroplasticity Physically Happens

It almost seems too simple – too easy – and the concept is. However, harnessing neuroplasticity as an adult requires <u>specific circumstances</u>, including focus, dedication, and persistence, but it can be done. What you pay attention to, what you think and feel and want, and how you react and behave all physically shape your brain.

Hanson explains how neuroplasticity is accomplished:

- Busy regions get more blood flow since they need more oxygen and glucose.
- The genes inside neurons get more or less active; for example, people who routinely relax have im-

(Continued on page 16)

#### The One Sure Way (Continued from page 14)

cret: <u>the TPN and DMN are mutually exclusive</u>. They both can't operate at the same time. The activation of the DMN inhibits the TPN and vice versa. By engaging the TPN, you deactivate the DMN and stop the thought loop.

Works every time.

The next time you feel helplessly lost in worry or like you're drowning in self-criticism realize that you're in control of directing your attention, which changes your brain activity. You don't have to struggle, over-power your DMN, and "let it go." You just have to intentionally engage your TPN and "let it be."

Debbie Hampton recovered from a suicide attempt and resulting brain injury to become an inspirational and educational writer. She is the author of <u>Beat Depression And Anxiety By Changing Your Brain</u> and a memoir, <u>Sex, Suicide, and Serotonin</u>. Debbie writes for The Huffington Post, MindBodyGreen, and more. On her website, <u>The Best Brain Possible</u>, she shares information and inspiration on how to better your brain and life.

Neuroplasticity (Continued from page 15)

proved expression of genes that calm down stress reactions, making them more resilient.

- Neural Connections that are relatively inactive wither away; it's a kind of neural Darwinism, the survival of the busiest, use it or lose it.
- "Neurons that fire together, wire together." This saying from the work of Donald Hebb means that synapses the connections between neurons get more sensitive, plus new neurons grow, producing thicker neural layers.

Neuroplasticity works under the same conditions as physical exercise does for the body. A single Zumba class or one run is not going to make much difference. However, the same practices done with consistency, over time, will gradually have noticeable, lasting effects on your body. The same is true for the practices which shape your brain.

It occurs to me that self-discipline, then, is not so much about control as it is about the conscious creation of yourself.

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# FROM THE NEVER SAY HEVER ARCHIVES:

(This article first appeared in the Spring/Summer 2014 issue of Never Say Never. rws)

# Human Brain Donation for Research

by Kay Zeaman

Great strides are being made each day in the field of brain research. For example, postmortem human brain research has played a significant role in identifying the function of an abnormal gene in Huntington's disease and the damage to a specific population of neurons in Parkinson's disease. Brain research provides our biggest hope of producing more effective treatments for brain disorders like OCD. But, did you know that progress is being delayed because of a scarcity of human brain donors?

I have done my own research on the topic as I have made the decision to donate my brain at the time of my death.

First I contacted the University of Michigan Anatomical Donations Program. They accept whole body donations. If you are interested they can be reached at 734-764-4359 or see <u>www.med.umich.edu/anatomy/donors</u> Although the university does not charge for the body donation my funeral director said there would be a charge of \$1500 for him to make the arrangements. Also he told me that it is necessary to be registered before death or the body donation will not be accepted.

Other whole body donations in Michigan are:

Michigan State University 517-353-5398 or see www.anatomy.msu.edu/Willed%20Body%20Program/index.html

Wayne State University 313-577-1188 or see bodybequest.med.wayne.edu

Western Michigan University in Kalamazoo 888-436-7366 www.med.wmich.edu/giving/anatomical-gifts

Then I contacted the Eunice Kennedy Shriver Brain Bank at the University of Maryland. I got a letter back saying that they would not accept my brain donation because they specialize in research for

(continued on page 18)

Human Brain Donation for Research (Continued from page 17)

brain disorders like autism.

Last I contacted the Harvard Brain Tissue Resource Center at McLean Hospital. I called 1-800-BRAIN-BANK and asked about my brain donation and was told they are very interested in receiving brains with OCD for research. I filled out the online form to be a donor and have sent it to Harvard to be registered.

The family of the deceased must notify Harvard immediately upon the death of a loved one as the brain must be obtained within 24 hours after death to be of value to researchers. Also the body must be refrigerated within 6 hours of death. A small amount of brain tissue provides a large number of samples for many researchers. Harvard has a twenty-four hour answering service at 1-800-BRAIN-BANK.

After notification of death, a pathologist is sent from Harvard to remove the brain. Mine will be done at Spectrum Hospital here in Grand Rapids, MI. There is no cost to the family for this. I am having an open casket viewing which will not be affected by this donation. See <u>www.brainbank.mclean.org</u> for more information.

A neuropathologist does a complete examination of the brain and writes up a report which is given free to the family of the deceased. Samples of the brain tissue and a copy of the report are sent to researchers who are working on OCD/depression. It may be further examined by microscope and other means.

I should also mention brain banks use donations of normal brains too to be used to compare to brains with abnormalities.

Brain donation is still somewhat new to funeral directors so here is the approach I used and it was successful. First I visited several funeral homes and got a contract estimate from each one in writing for their services for the specific services and casket I wanted. Then I compared the contracts for several weeks. After I chose the one I preferred I contacted the funeral home and told them I was interested in signing the contract (dying is not inexpensive so there was a \$10,000 contract up for grabs) but I needed one requirement. Then I gave them all the information about the Harvard Brain Bank and they personally contacted them. They had not done a donation to Harvard before. The funeral home I am working with, Metcalf-Jonkhoff, will not be charging me any additional fees but they will be making phone calls and coordinating the brain donation at time of death so there is virtually no cost for this donation.

For your information the Harvard Brain Bank is also accepting brains of individuals with schizophrenia or manic depressive illness as well as parents, siblings and offspring of these individuals to study the genetics involved.

Kay Zeaman is an OCDFM Board member who is always looking for interesting, alternative methods of addressing OCD.

# PARTIAL HOSPITALIZATION PROGRAMS

There is a treatment option available for adolescents and adults in many areas that is often not known or considered by individuals who are struggling with OCD, anxiety, or depression. Partial Hospitalization Programs (PHP) are intensive programs offered by hospitals and clinics, and can benefit those who need more help than traditional outpatient settings can provide. They typically run five days a week, from 8 or 9 am to 3 or 4 pm, and can include group therapy, private time with a psychiatrist, art or music therapy or other activity time, and education programs. They usually include lunch, and some include transportation. Here, we list some of these programs for your information.

#### St. Joseph Mercy Hospital, Ann Arbor, MI

Adult Partial Hospitalization Program, 734-712-5850 www.stjoesannarbor.org/AdultPartialHospitalizationProgram

Adolescent Partial Hospitalization Program, 734-712-5750 www.stjoesannarbor.org/AdolescentPartialHospitalizationProgram

Beaumont Hospital, Royal Oak, MI, 248-898-2222 www.beaumont.edu/centers-services/psychiatry/partial-hospitalization-program

#### St. John Providence Hospital, Southfield, MI, 800-875-5566

www.stjohnprovidence.org/behavioral-health

#### New Center Community Services, Detroit, MI

www.newcentercmhs.org/partial-hospitalization-program

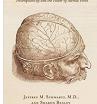
#### Allegiance Health, Jackson, MI, 517-788-4859 or 517-789-5971 www.allegiancehealth.org/services/behavioral-health/services/partialhospitalization-program

# New Oakland Child-Adolescent & Family Center, 5 locations in tri-county area, 800-395-3223

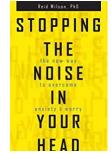
www.newoakland.org/mental-health-services/face-to-face-day-program.html

### SUGGESTED READING

#### The Mind & The Brain

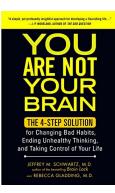


Jeffrey M. Schwartz, MD and Sharon Begley *The Mind and the Brain: Neuroplasticity and the Power of Mental Force* HarperCollins Publishers, 2009 ISBN 978-0060988470

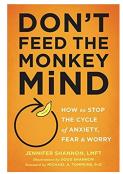


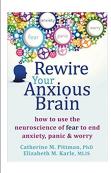
Reid Wilson , PhD Stopping the Noise in Your Head: the New Way to Overcome Anxiety and Worry HCI, 2016 ISBN 978-0757319068

Jeffrey M. Schwartz, MD and Rebecca Gladding, MD You Are Not Your Brain: The 4-Step Solution for Changing Bad Habits, Ending Unhealthy Thinking, and Taking Control of Your Life Avery, 2011 ISBN 978-1583334836



Jennifer Shannon LMFT Don't Feed the Monkey Mind: How to Stop the Cycle of Anxiety, Fear, and Worry New Harbinger Publications, 2017 ISBN 978-1626255067





Catherine M Pittman, PhD and Elizabeth M Karle, MLIS Rewire Your Anxious Brain: How to Use the Neuroscience of Fear to End Anxiety, Panic, and Worry New Harbinger Publications, 2015 A Four-Step Self-Treatment Method to Change Your Brain Chemistry **BRAIN LOCK** Free Yourself from Obsessive-Compulsive Behavior JEFFREY M. SCHWARTZ, MD with BEVERLY BEVETTE With a New Preface by the Author Jeffrey M. Schwartz, MD Brain Lock: Free Yourself from Obsessive-Compulsive Behavior Twentieth Anniversary Edition Harper Perennial, 2016 ISBN 978-0062561435

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# PROFESSIONAL DIRECTORY

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Treatment professionals, what better way to find the OCD sufferers who need your help, and to give them a way to find you. Just place your business card in *Never Say Never*, the quarterly newsletter of The OCD Foundation of Michigan. For just \$25.00 per issue, your card can be in the hands of the very people who need you most. It's a great way to reach out to the OCD community, and at the same time support The OCD Foundation of Michigan. Send your card to OCDFM, P.O. Box 510412, Livonia, MI 48151-6412, or e-mail to OCDmich@aol.com. For more information, call 734-466-3105.

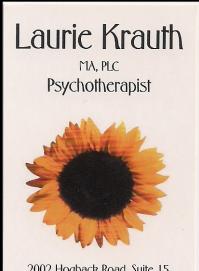
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Laurie Epstein Kach, LMSW ACSW Clinical Psychotherapist Individual, Couples and Familles

Center for the Treatment of Anxiety Disorders 28592 Orchard Lake Rd, Suite 301 Farmington Hills, MI 48334 248 508-1411 ~ Fax 248 626-7277



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Laura G. Nisenson, Ph.D.

425 E. Washington Suite 101D Ann Arbor, MI 48104

(734) 623-0895

### PLEASE HELP

The OCD Foundation of Michigan is funded solely by your annual membership fees and additional donations. We have no paid staff. All work is lovingly performed by a dedicated group of volunteers. WHY NOT VOLUNTEER YOUR TIME? Call 734-466-3105 or e-mail OCDmich@aol.com.

	The OCD Foundation of Mic Membership Application		
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5			
	find my check for \$20 annual membership fee.		
Enclosed please	find my check for \$20 annual membership fee. find an additional donation of \$		
Enclosed please	•		

Please Don't Throw Me Away

You've finished reading me and don't need to keep me anymore. Or worse (boo-hoo), you don't need me and don't even want me. In either case, please take me somewhere where I can help someone else. Take me to your library. Take me to your doctor, therapist, or local mental health clinic. Take me to your leader. But please, please, don't throw me away.



### The OCD Foundation of Michigan Mission Statement

- To recognize that Obsessive-Compulsive Disorder (OCD) is an anxietydriven, neurobiobehavioral disorder that can be successfully treated.
- To offer a network of information, support, and education for people living with OCD, their families and friends, and the community.

#### IF YOU WOULD LIKE TO BE ADDED TO OR DELETED FROM THE MAILING LIST PLEASE CONTACT US

The OCD Foundation of Michigan P.O. Box 510412 Livonia, Ml 48151-6412