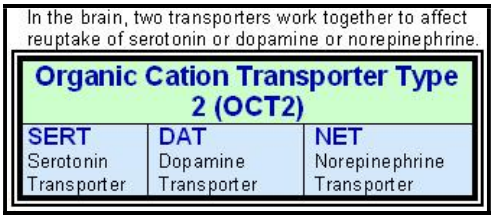
A University of Minnesota Medical School Published Research Project

Neuro Research

A Medical Education Company

THIS TECHONOLGY IS NOW: INDICATED FOR EVERYONE



A partial listing:

- Adrenal fatigue or burnout
- Addiction
- Alzheimer's disease
- Anorexia
- Anxiety
- Asperger's Syndrome
- Attention Deficit Disorder (ADD)
- Attention Deficit Hyperactivity Disorder (ADHD)
- Autism
- Bulimia
- Serotonin driven coronary artery disease
- Chronic pain
- Chronic stress
- Cognitive deterioration
- Cortisol Dysfunction
- Crohn's disease
- DARPP-32
- Dementia
- Depersonalization disorder
- Depression
- Fibromyalgia
- GABA dysfunction
- Glutamate regulation
- Hormone dysfunction
- Hyperactivity
- Impulsivity
- Inappropriate Aggression
- Insomnia
- Irritable Bowel Syndrome
- Migraine Headaches
- Nocturnal myoclonus (Restless Leg Syndrome)
- Obesity
- Obsessionality
- Obsessive Compulsive Disorder
- Organ system dysfunction
- Panic Attacks
- Parkinson disease
- Phobias
- Post-traumatic stress disorder (PTSD)
- Premenstrual Syndrome (PMS)
- Psychotic Illness
- Schizophrenia
- Seasonal Affective Disorder
- Social anxiety disorder
- Tension Headaches
- Tourette's syndrome
- Traumatic brain injury
- Trichotillomania
- Ulcerative Colitis

The body has the ability to heal itself if given a chance.

Break a bone the body heals. Sustain a large cut, the body heals. When healing does not happen normally, perform testing looking for a deficient system.

So how does the system heal when the flow of electricity between neurons is damaged?

The serotonin and dopamine (catecholamine) systems directly and indirectly regulate, control, and/or impact virtually every function in the body.

Contrary to the standard model levels of serotonin, dopamine, and norepinephrine are controlled by two reuptake transporters; a "high affinity" transporter **(SERT, DAT, and NET)** and the OCT2. The "high affinity" transporters that act like a large vacuum taking up everything they can. **The OCT2 then fine tunes neurotransmitters not transported by the "high affinity" transporters.**

"High affinity" transporters are not implicated in disease or dysfunction. The OCT2 are. Since the late 1990s world-wide research has focused on the OCT2 as the money shot when it comes to disease. Hundreds of papers have been written, huge research projects have evolved. With the exception of our writings, none have found the holy grail; OCT2 control. We have it all.

Anyone that has mastered this approach realizes it is far more complex then simply determining if neurotransmitter levels are high or low.

The OCT2 transporters are ubiquitously found in the brain (cerebral cortex, hippocampus, corpus striatum, nucleus amygdaloideus, thalamus), kidneys, GI tract, liver, lungs, inner ear, etc.

Serotonin, dopamine, and norepinephrine neurons occupy discrete areas of the brain and kidneys. By comparison OCT2 is everywhere. Like a glove on a hand the OCT2 covers the brain.

When the flow of electricity is ineffective in one are due to dopamine, serotonin, and/or norepinephrine dysfunction the whole OCT2 system reconfigures throughout the body in order to heal the system and restore optimal flow of electricity.

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The OCT2 transporters are encoded to fine tune serotonin, dopamine, norepinephrine, and epinephrine levels through body at levels needed for optimal system function.

The endogenous state is the normal day-to-day state that occurs when no supplemental amino acids are being taken. It also occurs when only one amino acid precursor of serotonin or dopamine is given such as only 5-HTP or only L-dopa.

The competitive inhibition state occurs when significant amounts of both serotonin and dopamine amino acid precursors are given simultaneously.

In **all patients** optimization of the OCT2 throughout the body ONLY occurs in the competitive inhibition state. Having assayed thousand of patients in the last 10 years it is apparent that none had optimal OCT2 function in the endogenous state. This leads to the recommendation that all patients require OCT2 optimization with MTO for optimal system function.

There are two classes that need to be addressed. The first is **patients with active disease** symptoms such as in the left column.

The second is **suboptimal system function**. Everyone falls into this category. Restoration of function requires amino acids and MTO. The OCT2 covers the brain. Localized damage that does not cause florid disease can cause suboptimal system function, a state that may be unnoticed. It appears we all have some degree of this. A primary cause is neurotoxins (see attached).

The OCT2 is encoded for optimal flow a state that can't achieved without help.

Optimized people react and tolerate stress better. Thinking is calmer and focused. Symptoms associated with suboptimal system function are nebulous traits that are independent of disease such as having problems concentrating, the old age brain, brief fatigue during the day, can't seem to get going on projects and a host of other things. Patients with and without disease report positive outcomes for various reasons.

For more information contact me.