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R&R™ for the management of Hyposerotonergic™ conditions.

To: An open letter

From: Marty Hinz, MD
President of Clinical Research
NeuroResearch Centers, Inc.
1150 88th Ave W
Duluth, MN 5580
+1-218-626-22208



Drugs that work with neurotransmitters do not work if there are not enough neurotransmitters.™

The only way to increase the synthesis of the total number of serotonin molecules in the central nervous system is by administering the required nutrients.™

Application #1: SSRI-induced serotonin depletion™

Re: R&R™ Medical Food

A hyposerotonergic™ condition occurs when serotonin concentrations on a normal diet are not enough, low, inadequate, depleted, deficient, or suboptimal. R&R™ is a medical food intended to manage hyposerotonergic conditions to include but not limited to symptoms caused by SSRI-induced serotonin depletion™, as discussed below.

Platelets contain 99% of whole blood serotonin.¹ SSRIs can deplete™ over 80% to 90% of platelet serotonin in two to three weeks.^{2,3} After longer periods of taking SSRIs, the HPLC lab assay can reveal platelet serotonin concentrations are undetectable.⁴ SSRI-induced serotonin depletion on a normal diet represents a hyposerotonergic condition. Serotonin does not cross the blood-brain barrier. When SSRI-induced serotonin depletion occurs on a modified normal diet, the only way to increase the total number of serotonin molecules in the central nervous system is by administering the required nutrients.

When the SSRI drug quits working™, or when new-onset or relapse of symptoms occur, the differential diagnosis may contain the following.

1. SSRI-induced serotonin depletion symptoms (hyposerotonergic condition)
2. Symptoms caused by drug tachyphylaxis (acute, sudden decrease in response to a drug) not related to SSRI-induced serotonin depletion
3. Progression of disease symptoms

The potential impact of R&R on the hyposerotonergic condition caused by SSRI-induced serotonin depletion:

1. R&R nutrients can restore depleted serotonin concentrations to levels higher than is possible with modification of a normal diet.
2. R&R manages dopamine⁵ and glutathione⁶ depletion™, which can be caused by administering nutrients required to restore depleted serotonin concentrations to levels higher than is possible with modification of a normal diet.

An empirical trial of R&R (two pills three times a day) can determine the role of SSRI-induced serotonin depletion in evaluating a differential diagnosis. While on a normal diet, symptoms that improve or resolve with nutrient administration represent nutritional deficiency symptoms, not disease symptoms. Starting R&R within one or two weeks of SSRI-induced serotonin depletion symptom onset can help control symptoms caused by SSRI-induced serotonin depletion in two or three days. If symptoms caused by SSRI-induced serotonin depletion have been present for several months, a longer time to resolution typically occurs.

President of Clinical Research
NeuroResearch Centers, Inc.

¹ McCloskey, D. et al. Selective Serotonin Reuptake Inhibitors (SSRIs): Measurement of Effect on Platelet Function Transl Res. 2008 March ; 151(3): 168–172

² Jordan, S. et al. Serotonergic agents increase the incidence of GI bleeds in patients with continuous-flow left ventricular assist devices J heart and lung tplt 05 Jan 2016, 35(6):823-824

³ Wagner, A. et. al. Effects of fluoxetine treatment of platelet 3H-imipramine binding, 5-HT uptake and 5-HT content in major depressive disorder, J of Affective Disorders, 20 (1990) 101-113

⁴ Mauer-Spurej E. et al. The influence of selective serotonin reuptake inhibitors on human platelet serotonin Thromb Haemost 2004;91:119-28

⁵ KEGG aromatic amino acid decarboxylase (EC 4.1.1.28) homo sapiens https://www.genome.jp/dbget-bin/www_bget?hsa:1644

⁶ Ballatori, N. et al. Glutathione dysregulation and the etiology and progression of human diseases Biol Chem. 2009 March ; 390(3): 191–214