**Topic:** *INSIG2* rs7566605 Variant’s Increased Risk of Genetic Obesity in Individuals Already Genetically and Environmentally Predisposed to Significant Obesity

**Synthesis of three articles:** Though Herbert et al. argue that the *INSIG2* rs7566605 variant shows strong association with increased body mass index in multiple cohorts (1), the significance of such results is weakened because the multiple cohorts studied predominantly consisted of individuals already predisposed to extreme and/or childhood obesity, and because no measurements were taken for obesity-related quantitative traits. Bressler et al., however, took comprehensive measurements of these treats and did not select for individuals with extreme and/or childhood obesity (2), concluding that the *INSIG2* rs7566605 variant does not show strong association with body mass index in healthy individuals (2). Even so, Bressler et al. fail to account for the confounding environmental variables of alcohol consumption, smoking, and habitual exercise. Therefore, Hall et al. took account of these variables, arguing that while the *INSIG2* rs7566605 variant does not play a role in genetic obesity in healthy individuals, it does play a role in individuals already predisposed to genetic obesity (3).

**Thesis:** Although the presence of the *INSIG2* rs756605 variant might plausibly lead to an increased risk of genetic obesity, not selecting for patients with obesity and measuring obesity-related quantitative traits shows no increased risk for obesity in healthy individuals; however, the effects of the *INSIG2* rs7566605 variant may only be apparent in individuals who are already genetically or environmentally predisposed to significant obesity.

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**Topic:** Failure, Delay, and Success in Removing Psychotic Symptoms of Schizophrenia and Other Psychopathological Disorders with Varying Polyunsaturated Fatty Acids such as Ethyl Eicosapentaenoic Acid, Omega-3 Essential Polyunsaturated Fatty Acids, and Omega-3 Fatty Acid During Varying Points of the Mental Illness

**Synthesis of three articles:** For those patients who were extremely ill and suffered psychotic symptoms for nearly two years, Wayne et al. failed to achieve positive results with the administration of EPA (Wayne et al., 2001). Arvindakshan et al., however, were successful in preventing the onset of psychotic episodes with the use of Omega-3 EPUFAs, by experimenting on patients who had been ill for a shorter period of time with much less of a progression in psychotic symptoms, though in most cases this prevention led only to a delay in symptom onset (Arvindakshan et al., 2003). On the other hand, Amminger et al. proved that using another drug in the PUFA class, Omega-3 Fatty Acid, on patients who were at ultra-high risk of experiencing psychotic episodes but did not yet have a disorder was a much better, risk-free alternative to preventing psychosis syndromes, as these patients experienced a full-on prevention of psychotic incidents (Amminger et al., 2010).

**Thesis:** Although EPA use on very ill patients has been proven to be inadequate when it comes to preventing or reducing psychotic episodes on psychotic or schizophrenic patients, the use of Omega-3 EPUFAs on patients with less severe episodes has been more successful, though in many instances it has resulted in only a delay of symptom onset. The use of Omega-3 Fatty Acid, however, has had effective results in bringing about a full-on prevention of psychopathology in at-risk patients.