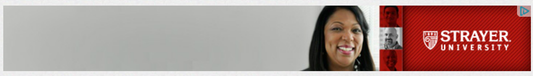

THE HISTORY OF PHENYLETHYLAMINE.

Sep 5, 2011 | By Andrew Breslin

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Phenylethylamine is a chemical that makes you feel happy. Your body produces it, and it is present in many food sources, including chocolate. While chocolate does make many people happy, the phenylethylamine has little to do with it. Your body will break down the phenylethylamine in chocolate and other food before it ever makes it to your brain. Exercise, on the other hand, can stimulate natural phenylethylamine production in your body.

MARCELI NENCKI

The honor of having first isolated and identified phenylethylamine goes to Marceli Nencki. Born in 1847 in Poland, Nencki was an early pioneer of the field of biochemistry. He collaborated with the famous physiologist Ivan Pavlov, with whom he did important work studying the biochemistry of urea synthesis. In his later career he studied and characterized hemoglobin, the chemical in red blood cells responsible for carrying oxygen to tissues. Nencki isolated PEA from decomposing gelatin, presenting this discovery in 1876.

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After Nencki's initial discovery, other scientists identified phenylethylamine, most often in association with rotting or fermenting food. Nencki's protege, Jules Jeanneret, reproduced his mentor's results and isolated PEA from gelatin. Schulze and Barbieri presented their discovery that bacteria in an oxygen-free environment can chemically transform the amino acid phenylalanine into PEA in 1879. In 1882 and 1883, Gautier and Etard isolated it from decomposing mackerel. Winterstein and Bisegger found high levels of PEA in ripe cheese in 1906.

PHENYLETHYLAMINE IN THE BODY

Scientists did not begin to understand PEA's important role in neurochemistry until the 1900s. A series of papers published between 1909 and 1911 by G Barger, H.H. Dale, W.E. Dixon, G.S. Walpole and A. Clark illustrated the physiological response of PEA and related compounds. In a 1995 paper published in the "Journal of Neuropsychiatry and Clinical Neurosciences," H.C. Sabelli and J.I. Javaid observed that levels of the main chemical metabolite of PEA are low in depressed and schizophrenic patients; they also observed that administration of PEA had improved mood in depressed patients. They speculated that further exploration of PEA metabolism could prove useful in the diagnosis and treatment of depression.

PHENYLETHYLAMINE AND DEPRESSION

A 2001 paper by A Szabo, E Billett and J Turner published in the "British Journal of Sports Medicine" further explored the role of PEA in depression. The paper proposed that the well-established therapeutic role of physical exercise in fighting depression may be due in part to increased levels of PEA, itself associated with mood improvements in depressed patients. The study found that exercise does appear to increase PEA levels, and it proposed that this is a mechanism of action for the anti-depressive effects of exercise.

CHOCOLATE

Although chocolate does contain high concentrations of PEA, it's unlikely that this plays a significant role in your brain chemistry. A popular book by Michael Liebowitz, "The Chemistry of Love," was published in 1983; it popularized the idea that eating chocolate will make you happy because of all the PEA. We now know that very little of the PEA in chocolate will ever make it to your brain. In fact, even directly administered PEA shows anti-depressive effects only if combined with a monoamine oxidase B inhibitor such as selegiline. Unless you go out of your way to inhibit your digestive enzymes, they're going to break that PEA down. If you really want to fight depression with the help of PEA, put down the candy bar and go for a nice run.

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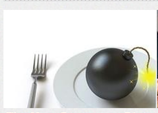

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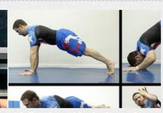

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