

Follow the Chisum Fitness Trail Article – Binge Eating

RE: Binge Eating

The previous Fitness Trail Articles revisited the staggering statistics concerning obese American citizens, the accelerated financial demands upon these individuals, and the physiological implications for adolescents. It is acknowledged that many causal factors are intertwined, which leads to overweight and obese people.

Several genetic factors have shown promise as possible pathological markers for this meteoric rise. Two of the more prominent are the melanocortin 4 receptor (MC4R) gene and leptin receptor (LEPR) gene.

The hormone leptin has been linked to weight gain. Further research has noted the relationship between a mutation within this receptor gene and obesity. If this hormonal drip system is working correctly, the anorectic effects are present. The last stage in this process is the binding of the Melanocyte-stimulating hormone to the MC4R gene.

Conversely, when alterations occur, weight gain is inevitable. The question concerning the proportional nature of this increase has not been answered.

Binge eating has also been associated with obesity. In the obese person, they have a risk between 30% and 90% of having a history of binge eating, or will experience this within their new future. The rates reported within the non obese group are only 2% to 5%.

Branson et al. (2003. N. Eng. J. Med.) studied two groups of subjects. The experimental group consisted of 469 severely obese men (99) and women (370). A control group of 25 men (10) and women (15), without a familial history of obesity, or personal history of dieting, were chosen. Both groups were tested for serum concentrations of leptin, resting energy expenditure, body fatness, eating behaviors, and diet-induced thermogenesis.

The authors reported that approximately 66 obese subjects (14%) reported a history of binge eating. Twenty five people were found to have a MC4R mutation. Of these, 24 were obese (5.1%), while only one non obese person responded with a historical experience in this area.

This data is strikingly similar to that of leptin binding LEPR mutations reported in several current research publications. This is consistent with percentage of body fatness measures in those without mutations in the MC4R gene, leptin-binding LEPR, and in both carriers and non carriers. Carriers of this mutation are found to have a 100% risk of binge eating compared to only 14.2% in non carriers.

The authors enthusiastically support using MC4R as a genetic framework for control of eating behaviors. Binge eating has been shown to be a negative predictive factor in weight management treatment, and in the success of gastrointestinal surgical techniques.

In conclusion: Further research is necessary to fully understand the implications and clinical facilitation of the MC4R gene in obesity treatment. For those suffering with this mutation, it is paramount for the creation of a positive treatment option.

If you have any questions, please feel free to contact me.

Dr. Jack W. Chisum