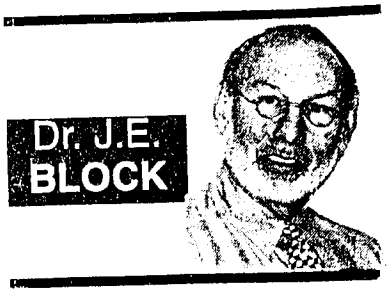
All Things Medical



Obesity

The treatment of obesity has changed!! The available medications are now felt to be necessary not just until patients reach their ideal goal weight, but probably for the rest of their lives. What has made one overweight in the first place is still operative. The biggest problem for obese persons is their ancestors. They have the thrifty gene which enabled our forefathers to get through famine. Today, in the land of plenty, particularly since we do not have to exert ourselves much to go through life, there is a build-up of adiposity (fat).

We do know that certain hormones such as thyroid, cortisone and serotonin play a role in obesity. We also know that other hormones (which we'll discuss later) stimulate specific fat cells that are referred to as the "brown fat" that are under a specific adrenal subhormone called Beta-3, play a powerful role in weight control. The new hormonal pathway has been essentially figured out. The hypothalamus (in the brain) is constantly making a hormone called neuropeptide-Y3. It is this hormone that drives us to eat and at the same time, slows our metabolism. The slowing comes from increasing insulin and making the muscle more resistant to the action of insulin and hence, burning less calories when one exercises. It also stimulates our adrenal gland to make cortisone that raises the blood sugar some and does cause weight and fluid gain. Glucose (sugar) is then stuffed into our fat cells as fat rather than being burned by our muscle.

Another key hormone is leptin. This is made by our fat cells and goes directly to our brain, down-regulating neuropeptide-Y. The lower the calorie intake, or the more someone exercises, the less leptin the body produces and hence, the harder it is to lose weight. To add insult to injury, the body defends against losing weight. This is particularly true in women at an earlier age, but as we get older, the sexes have the same propensity to hole onto one's extra pounds.

More on this next week