



## **Plastic Surgery & Dermatology Associates (PSDA)**

### **Dr. James Lowe's Summary on the Dietary Impact on Body Contouring Procedures**

Understanding the processes that lead to undesirable weight gain and diet resistant contours is basic to understanding wellness and longevity. The adipocyte or fat cell is the storage site for our body fat. We are born with a given number of fat cells and they increase in number through normal growth and development. However, dietary and hormonal events occur which may adversely effect our fat cell population.

Dietary indiscretions resulting in weight gain of 5-10 pounds are generally accommodated by changes in adipocyte volume without significantly altering fat cell number. Fat cells can swell and shrink in size in an effort to satisfy the storage requirements imposed by diet. However, when the storage capacity of the adipocyte is exceeded and dietary overload continues, the stimulus to create additional fat cells occurs. One cell turns into two and two into four....etc.

The bad news comes when weight loss is achieved but the former shape and figure is not restored. With weight loss the cells shrink in size but the added cell number remains. Liposuction was, of course, the surgeons answer to this problem. Remove the undesirable fat cells and the problem is solved. However, most of us who have performed liposuction over time recognized that some liposuction patients develop recurrence or new sites. What distinguishes these patients from those who have lasting results? The answer lies in understanding the driving metabolic influences in each patient.

Recent evidence points to the fact that diet, exercise, and hormones play the key role in controlling undesirable fat metabolism. They not only contribute to improved surgical outcome with liposuction, but also are the pillars for wellness and longevity. It has been stated that virtually all patients seeking liposuction have an elevated fasting insulin in excess of 15IU/ml. There is great significance to an elevated insulin level in regard to fat metabolism. The effects of hyperinsulinemia can be summarized as follows.

- excess calorie consumption
- weight gain
- increased stored fat
- increased cortisol secretion
- increase in free radicals