

WEIGHT LOSS

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NOT TO BE CONSTRUED AS MEDICAL ADVICE

Weight loss in a word is “**COMMITMENT**”

Are you committed to losing the weight? Are you willing to do what is necessary to be the gorgeous you that you rightfully are? This lecture is to provide the information.

Facts:

1. 2/3 of Americans are overweight (71% of males and 62% of females) BMI>25
2. Pro-inflammatory
3. Excessive wear on heart, joints
4. Precursor to diabetes, HTN, gout, shortened life span

Causes:

1. Eating too many CHO's, sugars, HFCS, saturated fats
2. Excessive intake to caloric expenditure
3. Diet deficient in nutrients: B vitamins, Mg, Zn, Chr, EFA and omega-3's
4. Food allergies

Non Nutritional Causes:

1. Lack of exercise
2. Thrifty gene also see *The Pleasure Trap* by Dr. Alan Goldhamer for dopamine
3. Hormonal imbalances – high or low cortisol, high insulin, low IGF-1, high estrogens, low testosterone
4. Heavy metals

Some of the factors necessary for weight loss are:

1. Eat better – not necessarily less
 - Better choices – no junk, no refined carbs, no tempting things in house
 - Use fruits, veggies, high quality protein, lots of water
 - Thin people use small things to curb cravings (supplements help!!!)
2. Exercise – Cardio workout to regain muscle mass
 - Don't sit still - move, stand, walk, take stairs
3. Keep an eye on weight (but not daily fluctuations)
Keep 5 lbs from becoming 25!
4. Remove food as comfort – exercise, see movie, visit friends, bubble bath
5. Don't clean plate – listen to body clues as to when full
6. Don't skip meals – a little food is great to keep blood sugar stable

Hormones stimulating Metabolic increase (and thus weight loss):

1. T3
2. Epinephrine
3. IGF-1

Surgery:

Problems: 5% death rate, scarring, herniation, ulcers, infections, reduced GI function

Diet plans:

ADA Diet

Least success because of advocating 50-50% of calories from carbs!!!

Allergy Free Diet

Lose 5 lbs – stress fluid lost

Atkin's Diet

First phase is ketosis – fat converted into energy (ketones)

With enough protein can save muscle mass

Disadvantage – ketosis may strain kidneys

Does not address or correct potassium mineral ratios for normal insulin

Blood type diet

Not a panacea but can answer a lot of issues with diet

Cabbage soup diet

Cabbage soup for seven days plus other things – may help heal the GI tract

Candida Diet

Can lose 2-12 lbs in first month

Dean Ornish

Low fat – mainly vegetarian diet. This is a “real food” diet and has success with its increased potassium levels to support insulin uptake into cells.

Low essential fatty acids

Fit for Life Diet

Marilyn and Harvey Diamond – food combining emphasis. Never eat carbs and protein together. Insufficient scientific or clinical evidence

The Grapefruit Diet

21 day program of grapefruit and a little protein

Jenny Craig

Membership plus \$11-15 /day for Jenny's cuisine

(60 % carbs 20% fat 20% protein)

Key to success on Jenny Craig is the transitional period where the client goes from pre-packaged to regular, prepared meals.

No exercise involved

New Beverly Hills Diet

Lots of fruit – different fruit on different days. Addresses mineral imbalances of hormones so has initial success

Perricone Diet

Not weight loss but boosting diet/nutrition to protect against free radicals

Pritikin Diet

Sensible and healthy diet

Raw Food Diet

Raw not always the healthiest. Broccoli Fe went from 6% to 30%

Hard to maintain

South Beach Diet

Three phases

Much of 8-13 lbs lost in first 14 days is water which will be regained when carb intake resumes

Subway Diet

Jared Fogle

Coffee, 6" sub with chips, 12' vegetable sub and he walked... A LOT

Calories in versus calories out

Zone Diet

Barry Sears – very scientific, very detailed (i.e. difficult)

Time consuming as eat 6x/day

This is a “real “food diet and why it has success.

Weight Watchers

Low emphasis on exercise

Long-term group therapy impedes the development of self-reliance and self-discipline

Problems of High Carb Diet:

High blood pressure, diabetes, heart disease (#1 killer in America today) - all from abnormal hormone levels.

Metabolism Types: *“Turn Up the Heat”* by Philip Goglia

Fat and protein efficient type – 74% of population

Carbohydrate efficient type – 23% of population

Dual – 3% of population

Supplementation:

1. Multivitamin/mineral
2. EFA's and fish oils – take 6 mos to 1 yr to reestablish healthy membranes
3. Increased Chr to help regulate blood glucose levels and metabolism
4. More B vits and Mg for ATP production
5. Lecithin – mobilize cholesterol in liver and gallbladder
6. Cynara – mobilize lipids in liver and gallbladder, conjectured to improve insulin

Five basic factors needed for fat burning

1. l-Carnitine needed to bring lipids into cells to be burned for fuel
2. Niacin (B3)
3. Pantothenic acid (B5) Or blood fat levels will rise
4. Riboflavin (B2) Or will burn glucose anaerobically – lactic acid and fatigue
5. COQ10

Fat Burning Supplements:

1. Guarana – similar to caffeine, can become jittery
2. Yerba Mate – natural energy stimulant, stimulated and so not hungry
3. Adaptogens like Rhodiola – balance cortisol levels which normalizes insulin
4. Phaseolus vulgaris – starch blocker in gut, excessive intestinal gas
5. Olestra – from chitin, binds to fats in meals preventing absorption, stool leakage
6. CLA (Conjugated linoleic acid) grass fed meats not factory, lowers insulin resistance, 1-4 g/day

7. Bitter orange – promotes fat burning, semi-selective sympathomimetic which is more selective for fat than CV, great bitter for increasing digestion esp proteins

Insulin Trap: (hormone juggling act)

Hormones affect behavior and behavior affects hormone levels

High insulin turns on enzymatic machinery to produce VLDL and LDL

High glucagon opposes this mechanism. IGF-1 is the peripheral glucose burning enzyme that allows glucose molecules into cells.

Lifestyle choices that promotes high insulin weakens lipid profile. Insulin allows glucose into cells and is the main fat storage hormone. Too much glucose in blood cannot be put into cells and so gets converted into VLDL and LDL as directed by insulin.

Three main hormones of obesity: Insulin, cortisol, and androgen. Insulin is the most important to producing fat. Under stress cortisol increases insulin levels. Androgen counteracts insulin effects and a reduction of androgens causes weight gain.

High insulin, as seen in high carb diet, is a tremendous appetite stimulant with a focus on the next meal. Reduction of insulin levels reduces appetite cravings. High insulin levels are evidenced by abdominal fat.

Cortisol is elevated in high stress (mental or physical) and cortisol amplifies insulin message. Increased blood glucose has no place to go without physical challenge and is converted into body fat. Without stress reduction, the tendency to obesity will increase.

Carb consumption will increase insulin levels which stimulates the appetite center with a corresponding feeling of hunger. A vicious cycle of high carbs, leading to high insulin, leading to a voracious appetite, lead to eating more carbs which will be stored as body fat. Dr. Will Ferrell MD called this the “torture chamber effect”. The body is making use of available food to store fat for famine that never comes in America.

With increasing girth there is a greater secretion of insulin and more and larger fat cells to handle the greater load of blood glucose. Mental stress fools the body into secreting more insulin in order to handle the increased load of blood sugar from cortisol.

Androgens (testosterone, DHEA, androstenedione) are the anti-fat hormones. Boys can eat the same junk food and yet not put on weight like adolescent girls. Androgens at puberty causes body fat loss and muscle gain.

Obesity is then an increase in insulin and cortisol with a decrease of androgens (Thyroid, IGF-1, estrogen, and epinephrine are also involved). Hormones direct human behavior and until these three are under control the body is directed to feed in abundance.

IGF-1 is found in the blood at 100x the level of insulin. IGF-1 and insulin are the two types of “fuel nozzles” used to get glucose into the cell. IGF-1 is made in the liver under the influence primarily of DHEA (from the adrenal gland) and growth hormone. IGF-1 provides nutritional advantage to the organs, bones, and muscle while elevated insulin provides advantage to the liver with its fat and cholesterol manufacture. A decrease in IGF-1 will cause an increase in insulin with its pro fat storage message. Healing obesity necessitates a rise in IGF-1. The pancreas was not designed to shore up falling IGF-1 levels (much smaller than the liver). IGF-1 release stopped by sedentary lifestyle and elevated blood glucose (excess stress and lack of fasting between meals). Excess insulin getting past the liver and going into the general circulation in the fasting state is insulin resistance (more later). IGF-1 release, under stimulation of growth

hormone, will increase blood glucose and lipids in-between meals and lower insulin requirements in the body periphery while burning energy source and thus not storing it.

When growth hormone levels slack and insulin increases, this leads to three problems. The appetite center is encouraged to consume more food, the liver is stimulated to make more LDL cholesterol, and there is a shift to have elevated cortisol, glucagon, and epinephrine to maintain blood sugar levels being lowered by excess insulin. Then muscle mass is lost as growth hormone is the anabolic hormone stimulator.

Removal of ovaries and/or menopause can exacerbate an androgen deficiency. 24 hr urine test to evaluate. May need supplementation.

Thyroid hormone may be low with a normal blood test. The stress of phlebotomy will remove thyroid from carrier protein. Thyroid determines the rate of calories being burned.

Increased Insulin:

- Increased body mass

- Chronic stress

- High carb consumption

- Body potassium (not blood) levels declining

- IGF-1 decrease

High insulin levels found in 90% of diabetics and majority of atherosclerotic patients. Most obese DM 2 patients have a pancreas that can no longer handle the insulin demand and so are diagnosed as diabetic (abnormally high blood glucose). If insulin levels are treated by increasing insulin levels, then blood sugar is normalized but the atherosclerosis is made worse by increased lipids. If the increased lipid levels are treated with statins then other necessary heart factors like CoQ10 are not being manufactured which lead to worsening heart health.

Minerals:

Food in the natural state has high levels of magnesium and potassium. Processed food loses these minerals but with a greatly increased sodium level. Low potassium diets have a risk of kidney damage and high blood pressure. Only 2% of the total body potassium is in the blood serum. Each glucose entering a cell requires one potassium ion. Low potassium will require higher insulin levels and thus cause the liver to produce more fat and cholesterol. Only the brain, RBC's, and liver do not need potassium to take up glucose. RBC's give up their potassium quickly leading to being inefficient and stiff (higher BP). Low potassium will cause the pancreas to produce more and more insulin.

Testosterone Levels:

Fall of testosterone will cause decrease of IGF-1. IGF-1 is necessary for the sulfation of glycoaminoglycans (GAG's) necessary for colon, stomach, blood vessel, and joint health. Loss of testosterone will cause increase of insulin with fat storage increase.

Estrogen:

Increased estrogen (OCP, estrogen mimics) will both increase growth hormone and inhibit IGF-1 release. The increased blood sugar is not compensated by IGF-1 and so causes a rise in insulin. Insulin will cause fat storage and cholesterol formation.

Cortisol:

Cortisol does not directly make people fat. Cortisol causes increase in blood sugar and without a physical requirement insulin is released to lower blood sugar. The liver receives the message and there in the liver insulin causes a synthesis of fat.

Thin people who have heart disease may have a deficient pancreas without sufficient insulin output. Eventually their IGF-1 levels will reduce blood sugars but the episodic glucose spikes causes AGE's which will damage the blood vessels. These people crave sugar as their insufficient insulin levels do not allow them to have ample glycogen stores to release glucose between meals.

Thyroid:

Thyroid determines how fast mitochondria can use up fuel supplies and also to maintain cation (mineral) pumps at the cell membrane. Decreased thyroid causes changes at the liver as it does not have the necessary direction from the hormone. Thyroid hormone range (TSH levels) is from survive (high end) to thrive (low end).

Exercise:

Growth hormone is elevated with regular exercise and low blood sugar from either fasting or exercise. Other details are involved. Growth hormone directs the liver to release sugar and fats as well as IGF-1. The more IGF-1 is released the less insulin is released.

Syndrome X:

Gerald Reaven MD Stanford. High insulin state evidenced by collection of increased abdominal fat, HBP, increased triglycerides, elevated LDL cholesterol and low HDL, hyperglycemia. Also possible are increased skin tags, atherosclerosis, and increased clotting tendency. Higher the insulin and lower the glucagon levels the more active is HMG CoA reductase. This causes the shift in abnormal lipid profiles.

Solution is increasing IGF-1. Decrease of IGF-1 is from high carb diet, stress, and lack of exercise. Increase IGF-1 with natural foods - minerals (K) and exercise. Decrease cortisol through stress reduction, also, can give phosphatidyl serine at night for inverted cortisol.

Human Chorionic Growth hormone (hCG):

Dr. Albert T. Simeons proposed that there were three kinds of stored fats.

- Structural – protects organs, keeps skin smooth
- Reserve fuel – to be drawn upon reduction of nutrients from the GI tract
- Abnormal – not easily accessed by body for nutritional needs. This is typically the last fat reserve drawn upon in a starvational state

hCG is not a sex hormone in that it will not increase normal function like FSH and LH. No virilization in females or feminization (grow breasts or reduce virility) in males.

Weight gain cause is proposed to be diencephalonic area of the brain.

Solution was found as in pregnancy the abnormal fat reserve was drawn upon and weight loss is initiated without hunger. Surprising is to the extent that nausea of

pregnancy can take away appetite without any lasting harm. The growing fetus will draw upon every energy supply of the mother. hCG allows the fetus to have an ample and continual supply of nutrients through a saturation of the blood. This is why a patient under hCG does not feel hungry. Functions as an enormous protective device for the fetus.

No thyroid to be taken during course of hCG as thyroid deficiency may be due to a lack of diencephalonic control, which may be corrected with hCG treatment.

hCG Treatment:

Loose up to 15 lbs in 26 days with oral hCG and 500 calorie diet.

34 lbs in 40 days

Must eat to capacity for one week before starting treatment (build normal reserves!) *if* in an unsatisfactory starved condition

First three days on hCG must eat as much as possible for these three days (again to build normal reserves for the hCG to release the abnormal reserves). Those that do not do this will have a harder time in the early dieting process. (May take aspirin for HA).

Then a 500 calorie diet is begun which is two protein shakes – am shake has reds added and the pm shake has greens added. Two apples are also eaten during the day. No makeup, lotions, or oils are allowed as these items cross the skin and affect the caloric count. The hCG will control hunger pains. The only hunger found will be if the abnormal fat sources are consumed and so hCG plan is self limiting. Any straying from the diet will lead to poor results.

If doing the 23 day program (15 lb weight loss) then apply hCG every day but if doing the 40 day program (up to 34 lb loss) then skip hCG one day a week (has to be the same day). This is to prevent hCG immunity.

Must drink an absolute minimum of 2 liters of water daily. If water is not freely available body will try to hold onto as much as possible. Prior diuretic use will alter weight loss as water is being replaced in the cells.

Menstruation: Best time to start is right after a period. Advisable to start at least 10 days before the onset. Likewise, should never end with menstruation so end three days before or three days after. No hCG is given during menstruation but the diet is continued and must resume hCG immediately afterwards.

Special herbal supplement will assist in mobilizing fat burning so that gall bladder complications are avoided.

Fluctuations of weight loss is due to water retention which will adjust to regular weight loss with time. Even the slightest dietary relapses will cause large weight gains.

No laxatives are allowed.

No massages are allowed.

Must continue the diet three days after last hCG. Then may eat what they like for the next three weeks except for no sugars and starches (watch sweet fruits!). Weight stability happens at the third week post treatment. Must always weigh selves immediately after getting out of bed and after voiding bladder. If weight gains are over two lbs then must skip (not eat lightly) both breakfast and lunch. In evening must eat large steak with a raw tomato or apple.