# THE IDEAL PROTEIN WEIGHT-LOSS METHOD: AN OVERVIEW

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The **IDEAL PROTEIN WEIGHT-LOSS METHOD** is a medically designed protocol that results in rapid fat loss while sparing the muscle mass. The program was developed in France 23 years ago by an MD, PhD for Olympic athletes who wanted to lose body fat without the loss of muscle, prior to the start of their training season. This protocol is also an excellent treatment for cellulite reeducation and has been used in well over one thousand medi-spas and aesthetical clinics in Canada for the last eight years with great success. Our program was introduced into the United States in January of 2008 and our FDA approved labeled products are only available through health care professionals and are not sold in stores or over the internet. Ideal Protein is not a multi-level marketing company. We are a manufacturer and distributor of high biological value foods and supplements and our sales team provides complete training and continual support free of charge. In addition our licensed medical professionals (physicians, pharmacists and nurse practitioners) are always available via phone or email to answer clinical questions.

## PRINCIPLES BEHIND THE PROTOCOL

To lose weight one must obviously consume fewer calories than are expended. However to specifically target fat loss other factors must be taken into consideration along with a maintenance program, which is completely different than the interventional program. The body has three compartments of energy from which to draw to meet its metabolic needs: blood glycogen (stored glucose), muscle and fat. It draws on these reserves in a very specific order; first burning the glucose in the blood and next the glycogen reserve. Once the glycogen is exhausted, then and only then will it turn to the muscle and fat compartments. If we replenish the glycogen stores the fat-burning stops until it is once again depleted. Two master metabolic hormones, insulin and glucagon, mediate how the body shifts from one compartment of energy to the next.

## OUR RESULTS ARE PREDICTABLE AND REPEATABLE

Most popular weight-loss programs advertise with testimonials and striking "before and after pictures". Invariably these are followed by a disclaimer that states "these results are not typical". Our clients will lose between 3 to 7 pounds per week (women typically losing 3 to 5 pounds and men 4 to 7 pounds). These results are typical and we have a record of 7 million successful dieters in our 23 years of experience.

## WHY WE ARE SUCCESSFUL

Any hypo-caloric diet will result in weight loss and most popular programs base their protocols on a "balanced diet". If we take the standard USDA recommendations of approximately 60% of calories derived from "good carbohydrates", 25% from protein and 15% from "healthy fats" and cut the amounts in half (keeping the ratio of macronutrients the same), we will have a "balanced diet" with one-half the calories.....and people will lose weight. But there are a few problems with this seemingly logical approach.

First, if we continue to replenish some of the glycogen stores every day (60% of calories coming from carbohydrates, most of which will be converted to glucose in vivo) our fat-burning will stop until that has been depleted. This will lead to an erratic weight loss. Second, and more importantly, decreasing the minimal daily requirements of protein will lead to muscle loss. As blood glucose drops (from the hypo-caloric intake) the body will burn fat but will also break down muscle via gluconeogenesis as a way to maintain proper glucose homeostasis. As we lose muscle our metabolism slows, also the heart is a muscle and losing some of its mass is not a good thing (remember the Phen-Fen diet?). Now when these folks have achieved their goal weight, what is the predictable result? They go back to eating "normal size" meals but their metabolism is slower and they regain the weight, often times ending up heavier than when they started the diet.

Our protocol takes a different track - for a relatively short time we will use an "unbalanced diet". We keep the minimum daily protein requirement the same (roughly 1/2 gram of protein per pound of lean body weight) and build the diet around this. Understand, this is not a "HIGH PROTEIN DIET". We give only the minimum and we do this to spare the muscle. Loss of muscle is unacceptable to us during a diet. Next, if we want to lose fat it is logical that we would eliminate most fats from the diet (but giving ample amounts of essential fatty acids). Now we are left with carbohydrates. Because we do not want to replace glycogen stores, we keep these at a bare minimum, approximately 20 grams per day. This forces the

body to stay in the "fat-burning mode" 24 hours a day and is therefore called a "ketogenic diet". Our dieters will consume four cups of non-starchy vegetables and unlimited salad daily. This will provide fiber to prevent constipation and they will be given a multi-vitamin, calcium, magnesium, potassium and sea salt to ensure proper electrolyte balance. We only provide what they would normally be getting from food groups that we are temporarily taking away (i.e. dairy, fruits and grains). Ideal Protein has also developed an "Alternative Protocol" which is suitable for Type I diabetics. This program is similar to the ketogenic diet except that we give a dairy, fruit and grain serving every day to prevent the patient from going into a state of ketosis. Because Type I Diabetics do not produce insulin, a risk of ketoacidosis exists and these patients should never be placed on a ketogenic diet. They will still experience just about the same rate of weight loss while sparing the muscle as the ketogenic dieters and will usually find they can substantially decrease their insulin requirements.

## OUR FOODS

The centerpiece of our protocol is the wonderful protein based foods the client will consume during the weight loss phases of the program. These are high biological value proteins, containing eight essential amino acids and are derived from non-GMO sources. We employ five different proteins: whey isolates, soy isolates, whole milk protein, albumin, and hydrolyzed collagen. This gives the client many options and is designed so folks with sensitivities to dairy, soy, or folks who are vegetarians may participate in the program. Our products are delicious and we currently have over 35 different products including shakes, juices, bars, soups, chili, pancakes, oatmeal, stew and many others. These are foods that are very satisfying - providing hot and cold foods, different textures and sweet, salty and crunchy snacks. The client will use these products to build complete meals, adding vegetables and salads. Each sealed envelope ensures full potency and contains up to 20 grams of protein with very little to no fat or sugar. These are easy to prepare and can be incorporated into a busy lifestyle very nicely.

## SYNDROME X: INSULIN RESISTANCE AND HYPERINSULINEMIA

Syndrome X, arguably the "epidemic of the century", is the name given to a general disorder characterized by four hallmark symptoms: central obesity, hypertension, hyperlipidemia and hyperglycemia. Gerald Reaven, MD (Professor Emeritus of Medicine at Stanford University) was the first person to use the term and to show a link between the hyper-secretion of insulin and subsequent insulin resistance and these four hallmark symptoms. Pharmacological treatments of the symptoms of Syndrome X never affect a cure, and many times will exacerbate the symptoms.

We commonly prescribe medications to help the pancreas produce even more insulin, give drugs to increase insulin receptor sensitivity or even give insulin directly in an attempt to regulate the blood glucose levels of these patients. This is a "Catch-22" situation because while the insulin receptors on muscle cells may be resistant and require increased amounts of the hormone to effect glucose uptake, other tissues and organs retain their sensitivity to insulin and prolonged exposure to high levels of the hormone invariably will lead to complications.

The kidney is a good example. Insulin stimulates sodium retention by the kidney, thus contributing to water retention and hypertension. Dr. Reaven cites polycystic ovary syndrome (a condition characterized by hyper-secretion of androgens by the ovary) as another example of insulin sensitive organs being affected. Basically the ovary, being constantly exposed to higher than normal levels of insulin, increases its testosterone production accordingly. Thus, the insulin resistance of one tissue (muscle cells) with the compensatory hyperinsulinemia that ensues will lead to many other insulin sensitive tissues being affected and so complicating the entire physiological picture of that individual. Another example is the body's production of cholesterol (de novo synthesis). Insulin greatly stimulates the enzyme HMG-CoA reductase, the rate-limiting enzyme involved in cholesterol synthesis. Simply put, "high levels of insulin is like putting gasoline on the enzyme" and the patient's cholesterol levels increase accordingly. Of course a statin then is usually prescribed. Glucagon has the opposite effect: it inhibits this enzyme and forces the cell to produce LDL receptors so the cell can pull cholesterol from the blood stream (1983 Nobel Prize in Medicine). The result is the patient's lipid profile improves tremendously - usually within 4 to 6 weeks.

At Ideal Protein, we believe that Syndrome X (Metabolic Syndrome) is a problem caused by food (too many carbohydrates, i.e. sugar) and the treatment is food. When we put patients of a ketogenic diet we immediately decrease insulin levels and many symptoms quickly improve. Moreover, by keeping insulin levels low, we now allow the cells to regain their sensitivity to insulin and the pancreas' production of insulin returns to normal. This has been confirmed by hundreds of before and after fasting insulin levels in patients seen in clinics that have adopted our protocol.

We provide a clinical guide to practices that employ our protocol that explains the pathophysiology of Syndrome X (well referenced) along with training as to what tests should be ordered to monitor the patients' progress. In addition there is ongoing support from our corporate medical staff.

There are many misconceptions about protein-based diets and "ketosis". Ketosis is a normal metabolic function like glycogenolysis, gluconeogenesis, or glycolosis and is totally safe as opposed to the pathological condition of ketoacidosis.

**Benefits of the program include:**

Weigh loss is quick, and this motivates patients to continue. Any diet's success depends on patient adherence.

As only a 5-7% weight loss is recognized for improving cardiovascular and metabolic parameters (blood pressure, blood lipids, waist circumference, blood sugar, etc.) VLCD meet and exceed this loss rapidly. A loss of 15-20% over 12-16 weeks is typical.

Some studies correlate long term maintenance with greater initial weight losses. The initial weight losses are high in a ketogenic VLCD.

Weight regain, if it occurs, is not accompanied by return to baseline of metabolic parameters. In other words, a patient may regain some weight, but does not regain the hypertension, dyslipidemia, and glycemia present before the VLCD.

Quick reduction in waist circumference and corresponding ventral adiposity.

Fast and impressive changes in glycemic control. Hemoglobin A1c improve and often normalize in only weeks. Post prandial (after meal) blood sugar excursions do not occur.

Glycemic improvement occurs quickly necessitating reduction and/or elimination of pharmacologic agents. This begins within days of starting the VLCD.

Blood pressure improvements begin even before appreciable weight losses.

Diabetic, lipid lowering, and blood pressure medications are typically greatly reduced or eliminated. Many, if not most patients want to reduce the number of medications they take.

Insulin sensitivity improves even without exercise. This increased sensitivity occurs in peripheral tissues as well as the liver.

Serum (blood) levels of fasting insulin are reduced.

Liver volume decreases significantly, and liver enzymes improve.

Pancreatic insulin (endogenous, or the patient's own insulin) secretion is enhanced

Hepatic (liver) glucose output is reduced.

Triglycerides drop drastically if elevated, and this occurs early in the diet. HDL-C (good cholesterol) increases, but this is over a longer period of time. LDL-C (bad cholesterol) may or may not improve in by total LDL-C measures. However, the LDL-C ratio of apoB (bad, dense component of LDL) and apoA (better, less atherogenic component of LDL) improves.

Protein has protective effects on kidney function in healthy patients.

Lack of hunger aids in diet compliance. Protein has the most satiating properties among the macronutrients.

Ketones have an anorexic and euphoric effect. The anorexic effect can be profound. This appetite suppressing effect may be so strong it that patients must be reminded to eat mandatory food and supplements.

Carbohydrates tend to stimulate hunger, and restricting intake helps with appetite control and reduced cravings.

Trend towards better weight maintenance. Weight gain that does occurs tends to be gains of lean body mass, where as regain after low protein diets tends to be more fat mass.

**Thermal effect of food is enhanced with protein**.

Weight loss from fat is greater while loss of lean body mass is minimized with adequate protein.

Reduced waist circumference and ventral adiposity. Losing belly fat is very aesthetically appealing for many patients and is a strong motivator.

Meal replacement in weight loss strategy enforces portion control and has demonstrated significantly greater weight losses than a prescribed diet of self-selected conventional food.

For type 2 diabetics, meal replacement and weekly sessions in a medically supervised setting are found very effective for weight loss.

Can be used for as first line treatment before, after, or as adjunct to other weight loss therapies. These include short and long term pharmacologic agents and surgery.

Summary: Overweight patients want fast results and a program they can adhere to. Providers want a safe program with clinically measurable outcomes. The VLCD with convenient, palatable protein meal supplements is an effective treatment tool to offer patients.

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