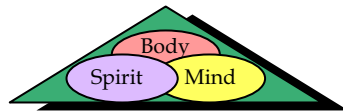


Chapter 7. The Super Meal Model



The Most Important Key

Most people are aware that nutrition, more than any other factor, is the key to successfully managing and controlling diabetes. However, many diabetics are not aware that nutrition is also the key to reversing diabetes. The primary reason for diabetes (and other systemic, degenerative diseases such as heart disease and arthritis) is nutritional imbalance. Nutritional imbalance can be categorized in two ways: (1) **toxic buildup/congestion** – eating too many “dead” foods full of chemical toxins that cannot be processed and eliminated by the body; and, (2) **nutritional deficiency** – eating too many “dead” foods that lack vitamins, minerals, amino acids, saccharides, fatty acids, enzymes, fiber and water. Both of these imbalances interfere with the body being able to function properly and succeed in its own defense against any disease.



Most diabetics are either not aware of the right nutritious foods to eat or are not willing to change their eating habits, leading to congestion and nutritional deficiency. This, in turn, progresses to increasing insulin and glucose levels, insulin resistance, inflammation, weight gain, fatigue, cravings, increasing blood pressure and cholesterol levels, and eventually a serious disease such as diabetes. And, all of this is primarily due to the diet (nutritional profile) of most diabetics being full of common mistakes, some of which are made knowingly, some unknowingly. This chapter will define the proper nutritional profile for diabetics – the Super Meal Model. This model will help diabetics to better control their insulin and blood glucose levels and trigger their bodies’ internal healing mechanisms.

The Super Meal Model

Most nutrition and diet books provide good descriptions of foods, vitamins, minerals and other vital nutrients. But, because those descriptions are seldom done in the context of a “model” (picture), it is difficult to understand and remember all the specific foods that are good or bad for your health. Even if you know what foods are good for you, it is still not clear what combinations of these foods will provide optimum health or help to fight a disease like diabetes. And, even if you know the right combinations of foods, counting calories can be very tedious and frustrating. All of this makes it difficult to design a program that is enjoyable, flexible, inexpensive and easy to remember, implement, and modify on a consistent basis to suit your health needs. Bottomline, if it’s not enjoyable or easy to implement, then, you will eventually return to your old eating habits.

As engineers, we design and develop products and solutions, based on an architectural design model that is supported by a set of engineering principles that meets the needs of the customer. As a result, it is easier to design a successful product that will work properly according to those engineering principles and customer requirements.



Similarly, I felt that it would be easier to design a healthy meal if I had a set of sound nutritional principles that aligned with the body’s needs. And because of my own frustration and ignorance with trying to figure out how to identify the right foods and design meals that would work for me, I felt that a simple model (picture) of what my meal plate should look like every time I ate would be easier to remember than counting calories. And, if that model is based on what my body requires biochemically and hormonally to fight the primary root causes of systemic degenerative diseases (e.g. nutritional deficiency, toxic overload, oxidation, inflammation, and hormonal imbalance), then, the model should work to optimize my health and fight any disease, including diabetes.

Since I was not much of a cook, I decided to design a simplistic model based on the body’s physical structure at the cellular level, e.g. water, fat,

protein, saccharides, etc. And, modify that model, based on information from several clinical studies about nutrition (listed in the Clinical References section of the Appendix). I initially started with approximately 65% carbohydrates and gradually lowered it to 40 to 45% (based on my *post-meal glucose testing*), while increasing the quality of the carbohydrates from processed to plant, the protein from land animal to plant and fish; and, the fat from animal and processed to plant. Refer to the following diagram, which depicts the contents of a typical super meal and what a typical meal plate should look like as a starting point.

- From a physical viewpoint, at least half of the plate should contain green, leafy and other bright-colored **vegetables** such as spinach, broccoli, red/yellow peppers, mushrooms, onions; a quarter of the plate should contain **lean protein** such as wild salmon, tuna, sardines or other cold water fish; and, depending on your health needs, the other quarter of the plate should contain a **legume, a whole grain or another vegetable** such as wild rice, quinoa, lentils, chickpeas, or organic brown rice. And, add a tablespoon of a **plant oil** such as extra virgin olive oil on top of the vegetables for the good fat.
- From a calorie perspective, approximately 40% to 50% of the total calories should be allocated for the **carbohydrates** such as **vegetables**. The percentage should be adjusted based on your daily activity level and the amount of daily exercise. If you have low activity and low exercise levels, as most diabetics tend to have, you should decrease your intake of carbohydrates to the low end of the range. And, because everyone is different, *increase your post-meal blood glucose testing* to determine the specific amounts of carbohydrates and other macronutrients that are best for you.
- Approximately 20% to 30% of the total calories should be allocated for the **proteins**, depending on the type of exercise (amount of weight-resistance training), the amount of land animal protein and how well your body metabolizes proteins. If most of the protein that you consume is conventional land animal protein, you should decrease your intake to the low end of the range. If you are eating mostly plant protein or performing a lot of weight-resistance training to build muscle, you should increase your intake of protein to the high end of the range.



- Approximately 25% to 35% of the total calories should be allocated for the **fats**, with the majority of that fat (90%) being allocated to fish and plant-based oils versus land animal-based fat. Increasing the amount of quality fat (and meal frequency) will be crucial for most diabetics to reduce the internal inflammation, obtain a feeling of satiety, metabolize old fat, and increase the absorption of the vegetable's fat-soluble nutrients (e.g. carotenoids).
- In general, 6 to 9 cups of **filtered water** should be consumed daily, including the water from the vegetables and fruits. But, don't get carried away with drinking too much water. In fact, if you are eating enough vegetables and fruits throughout the day, you may only need to drink 5 to 6 cups of water each day.

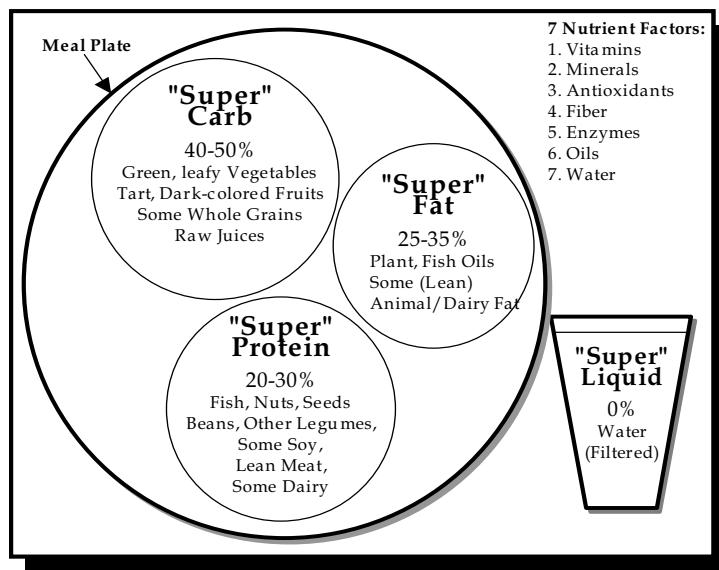


Figure 6. Super Meal Model

Since this Super Meal Model is *not* a one-size-fits-all model, these percentages will vary from person to person and should only be used as a guideline. These percentages will vary depending upon your activity and stress levels as you progress through your recovery.

Note: More importantly, ensure your super meals include foods that suit *your* taste/texture preferences, e.g. salty, sweet, bitter, buttery, crunchy, etc. Otherwise, you will not stick with the program!

For a typical meal of 500 calories, the gram and calorie counts would be:

- Carb 50 grams 200 calories
- Protein 37.5 grams 150 calories
- Fat 16.7 grams 150 calories
- Liquid 16 ounces 0 calories

Note: If you add a juice or similar beverage to the meal, don't forget to include its calories as part of the carbohydrate total. To maintain the balance of carbohydrates, protein, and fat, you can add a tablespoon of ground flaxseed or a protein/fiber powder supplement to the beverage.

If each meal consists of small, proportioned balanced amounts of these four macronutrients every day, this will prevent the biochemical and hormonal imbalances associated with traditional meals. These meals tend to be carb-heavy, fiber-deficient, water-deficient, and nutrient-deficient. If the four macronutrients come strictly from the group of 5 "live" (super) foods, your meal will qualify as a super meal. Ideally, your meal plate will look similar to the diagram in Figure 6, where most of the plate is plant-colored vegetables, a quarter of the plate is lean protein, and a small portion is allocated for the healthy (liquid) fat, which can be placed on top of the vegetables.



As you consume more of these super meals on a consistent basis (4 to 6 times a day), this will turn on the body's cleansing and healing mechanisms to gradually improve your health. On the other hand, the consistent consumption of the 5 "dead" foods will deteriorate the body leading to poor health and disease. Refer to Chapter 17 for some recipes of super meals and super snacks.

Whether you are a diabetic or not, you will notice an increase in your energy level if you can maintain the momentum of eating super meals consistently. If you are a diabetic you will notice a decrease in your average fasting blood glucose level within two to three weeks; and, more importantly, a decrease in your post-meal blood glucose level.

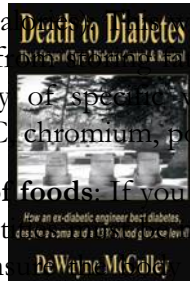
Nutritional Protocol: Attributes of Super Meals

The nutritional protocol, or attributes, of a super meal are similar to those of the Mediterranean diet, which includes fresh whole foods -- vegetables, fruits, fish, whole grains, nuts and olive oil -- that are high in fiber, Omega-3 fatty acids and low in refined carbohydrates. The super meal is designed to provide optimum nutrition to prevent and fight diabetes and other systemic, degenerative diseases/ailments such as heart disease, stroke, and obesity. These attributes specifically nourish, protect, cleanse and repair the body's cells by addressing the major root causes of Type 2 diabetes: insulin resistance (hormonal imbalance), inflammation, oxidation, nutritional deficiency, and toxic overload. Implement these attributes over a period of time, based on your current state of health, your health goals, lifestyle, exercise regimen and food preferences.

Smaller meal size (350-700 calories) will reduce the production of insulin and prevent the body from storing fat. Too much insulin in your blood also depletes the body of specific vitamins and minerals, e.g. Vitamin B-complex, Vitamin C, chromium, potassium, magnesium.

Minimum daily quantities of foods: If you don't like to count calories, then, the minimum daily quantities should be met and distributed across 4 to 6 daily meals/snacks to ensure you are acquiring enough of the proper nutrients throughout the day to repair the trillions of defective cells:

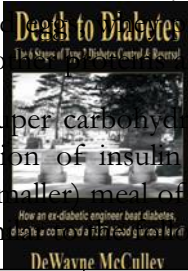
- 5 to 7 cups of bright-colored raw/lightly-steamed **vegetables** and 1-3 cups of **fruits**, including raw juices; 8-16 oz. wheat/barley grass juice; ideally at least 1-2 vegetables with each major meal.
- 3 to 4 tablespoons of a **plant oil** such as extra virgin olive oil or some other good plant oil such as macadamia nut oil; ideally 1 to 1½ tablespoons with each major meal.
- 5 to 7 cups of **filtered water**; approximately 2 cups with each meal.
- 2 to 3 cups/servings of **lean protein** (legumes, organic/fermented soy foods), fish, lean meat, low fat dairy.
- 1 to 2 cups of organic whole grains, including 1 to 3 slices of sprouted grain bread.



More frequent meals (4 to 6 times/day): This increases the thermogenic mechanisms, speeding up your metabolism. This also reduces the production of insulin, cholesterol, homocysteine, and triglycerides leading to the reduction in the thickness of the blood and a lower blood pressure.

Author's Personal Note: This was difficult for me because I didn't like to eat snacks and my schedule made it difficult to eat more frequently. But, I was able to find some healthy snack foods that made it easy to eat more frequently and more healthy. For example, a handful of nuts/seeds, some grapes and a glass of water are actually a balanced super snack because it contains the 4 major macronutrients: a carbohydrate (the grapes), a protein/fat (the nuts/seeds), and a liquid (the water). Apples, strawberries, pears, bananas, pulse food, and organic fruit juice were some of the other carbohydrates that I ate/drank as part of my snacks. Black bean soup, canned wild salmon, tuna, skinless chicken breast, ground flaxseed, soft-boiled eggs, protein powder, and soy protein nuggets were some of the other protein and fats.

Meal balance of “live” super carbohydrates, proteins, fats and liquids: This reduces the production of insulin and prevents the body from storing fat. For a typical (smaller) meal of 400-500 calories, the gram and calorie count should be similar to the following:



Macro-nutrient	% Calories	No. of Grams	No. of Calories
Carbohydrate	40-50%	40-62.5 grams	160-250 calories
Protein	20-30%	20-37.5 grams	80-150 calories
Fat	25-35%	11.1-19.4 grams	100-175 calories
Liquid	0-15%	16-24 ounces	0-75 calories

Figure 7. No. of Calories & Grams in a Super Meal