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Nutrition Guide

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What are the key factors to losing weight?

Successful weight loss depends on more than just *how much* you eat. Scientific research demonstrates that three factors drive healthy and sustainable weight loss:

What You Eat – The combination of carbohydrates, fats and proteins in your meals:

- Each type of food gives you a different amount of energy. Your body processes each of these foods differently, and you must achieve the right mix of nutrients to sustain a healthy body weight. Numerous studies have criticized the effectiveness of a low-fat diet[3,4,5]
- A low-carbohydrate diet supports higher metabolic rates throughout the day compared to a low-fat diet[1]

Food Composition – Within each category, which items you eat:

- Highly processed foods and those with refined grains don't keep you "full"
- Foods higher in fiber keep you fuller longer and result in less frequent eating[2]

When You Eat –

- Your body needs fuel; don't starve yourself!
- Timing of your meals may affect internal metabolic pathways

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What are the major "macro-nutrients" I should know?

Food gives us energy (duh-everybody knows that!) But how? A quick chemistry lesson: food is made of many molecules. The bonds between the atoms in each food molecule contain energy. Each type of food contains molecules with different types of bonds, each with different amounts of caloric energy and other functions, as shown below:

	What does it do? [16]	What should I eat? [17]	What should I limit? [17]
Protein	• Promotes growth and tissue repair • Preserves muscle mass	Chicken Fish Nuts Vegetables	Cold cuts Processed meats
Carbohydrate	• Contains glucose, which provides energy to all cells in your body • Supports proper kidney, brain and muscle function	Whole grains: • Whole wheat bread • Brown rice Fruit Dairy (sparingly)	Processed foods • French fries (potatoes) • Cookies Refined grains • White bread
Fat	• Enable vitamin absorption • Support growth and maintain normal cell functions	Unsaturated fats • Nuts • Seeds • Fish	Saturated fats • Red meat • Butter • Cheese

OnPoint Food Categories: Protein

What Is It?

Proteins are the building blocks for many parts of your body: muscles, bones, skin and hair. Protein molecules also make up enzymes that facilitate chemical processes within your body.

Each type of protein has a unique group called an amino acid, which are critical for chemical processes to take place in your body. Our bodies either make amino acids from scratch, or modify amino acids contained in our food. There are nine amino acids that our bodies cannot produce, and therefore must come from what we eat.

What Type of Protein Should I Look For?

Mix non-animal sources of protein such as beans/legumes and nuts with animal sources such as eggs, chicken, and fish. For those of you who are more adventurous, tofu, quinoa and chickpeas are also good sources of protein.

How Does Making Good Protein Choices Contribute to Good Health?

An adequate amount of *healthy sources of protein* in place of carbohydrates has been shown to lower blood pressure, reduce bad cholesterol, and diminish the chances of developing Type II Diabetes.

Sources: The Nutrition Source: Harvard University (17), Choose My Plate : USDA (18)

OnPoint Food Categories: Fruits and Vegetables

What Is a Fruit?

Fruit is the fleshy part of a flowering plant that contains seeds. Fruits includes: apples, bananas, grapefruits, grapes, oranges, peaches, pears, pineapple, plums, and many others.

What Is a Vegetable?

A vegetable is any edible part of a plant that can be eaten raw. While some commonly known vegetables are actually fruits based on the scientific term (such as peppers and zucchini), most vegetables come from other parts of the plant, including the leaves (lettuce, spinach), stem (asparagus) and the roots (carrots, radishes).

What Type of Fruits and Vegetables Should I Look For?

Eating a variety of fruits and vegetables is very important. Mixing the colors of the foods you eat is a good indication that you are consuming a variety of nutrients in your diet.

How Does Making Good Fruit and Vegetable Choices Contribute to Good Health?

Fruits and vegetables contain potassium, fiber, vitamin C, folate, and many other important nutrients. Potassium may help maintain healthy blood pressure. The fiber in fruits helps reduce bad cholesterol in your blood, and supports normal bowel function. Vitamin C assists growth and repair of all body tissues, and helps heal cuts and wounds. Folate helps the body form red blood cells, and assists normal fetal development during pregnancy.

Sources: The Nutrition Source: Harvard University (17), Choose My Plate : USDA (18)

OnPoint Food Categories: Starch

What Is It?

Starches are made up of carbohydrate, the macronutrient that also includes sugars and fibers. Historically, carbohydrates have served as the main source of energy in people's diets. Starches provide the body with glucose, which is converted to energy used to support bodily functions and physical activity. However the type of starches you eat is important; some types of carbohydrate-rich foods are more nutritious than others.

What Type of Carbohydrates Should I Look For?

Healthy forms of carbohydrates include whole grains, vegetables, fruits and beans. We will plan your meals so that you eat carbohydrates from each of these sources. Avoid white bread, pastries, sodas and other highly processed or refined foods. A common way to increase the proportion of "good" carbs is to substitute potato products for bean-based products when possible.

How Does Making Good Carbohydrate Choices Contribute to Good Health?

When thinking about carbohydrates, it is more important to eat the *right* type of food rather than think about the amount of carbohydrates in your diet. Eating carbohydrates-rich foods that are relatively higher in fiber and relatively lower in sugar can help provide a more steady stream of energy and keep you feeling "full" because they take longer to digest.

Sources: The Nutrition Source: Harvard University (17), Choose My Plate : USDA (18)

OnPoint Food Categories: Dairy

What Is It?

Dairy products include all foods and beverages that are derived from animal milk. These items include milk, cheese and yogurt. We also classify soy-based and vegetable-based products (i.e. soy, almond milk) as dairy products. Dairy products provide calcium, potassium and vitamin D.

What Type of Dairy Should I Look For?

If you do choose to eat and drink dairy products, the USDA recommends choosing options that are low in saturated fat. These options may include fat-free or low-fat milk, cheese and yogurt.

How Does Making Good Dairy Choices Contribute to Good Health?

Many people know that adequate calcium intake builds healthy bones. Humans tend to build bone density through age 30. However, there are numerous ways to keep our bones strong as we age. Regular exercise, as well as building a diet that contains vitamins D and K can help delay bone degradation.

Sources: The Nutrition Source: Harvard University (17), Choose My Plate : USDA (18)

OnPoint Food Categories: Fats

What Is It?

While the word "fat" is used in our everyday language, in a chemical sense, fat refers to a particular type of molecule made of carbon, oxygen and hydrogen atoms. Fats are classified as saturated, unsaturated or *"trans"* depending on the types of bonds between the atoms and the molecule's 3-D shape.

What Type of "Fatty Foods" Can I Eat?

Unsaturated "Good" Fat: includes almonds, hazelnuts, avocados, fish, seeds, and oils (olive, canola)

Saturated "Bad" Fat: **limit** pizza, processed meat (sausage, bacon, hamburgers) cheese, butter

Trans Fat: is synthetically produced and used in the fast food industry because it is ideal for making fried food and is less likely to become rancid

How Does Making Good Choices Contribute to Good Health?

New research suggests that healthy fats are necessary and beneficial for good health. A randomized trial known as "OmniHeart" found that eating moderate amount of unsaturated fats lowers blood pressure and reduces estimated cardiovascular risk (heart attack, stroke). Trans fats should absolutely be avoided, as they increase "bad" cholesterol levels, create inflammation, and contribute to insulin resistance.

Sources: The Nutrition Source: Harvard University (17), Choose My Plate : USDA (18)

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How often should I eat?

The debate about how often you should eat *continues to unfold* within the scientific community. Researchers continue to debate about the ideal number of meals, the timing between meals, and the benefits (if any) of nibbling. We recommend that you:

- **Don't Skip Breakfast**[6,10]: Eating a balanced breakfast that contains both carbohydrates and protein will "fill" you up for your daily activities, and help avoid food cravings during the afternoon.
- **Eat When You are Hungry**[8]: While this may sound obvious, delaying meals may result in consuming larger portion sizes and excess calories.
- **"Snacks" *<u>are</u>* important**: Numerous studies have found a direct relationship between the number of eating episodes per day and weight loss, while others claim that this relationship was caused by factors outside the study.
  - ✓ We believe that healthy snacks are beneficial because they sustain metabolic activity, decrease food cravings, and help avoid overeating during meals.

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What is the proper portion size?

When it comes to portions, two factors are key[13]:

- **Size Matters**: total portion size is related to how much caloric energy you consume
- **Composition Matters**: foods with high caloric density influence weight gain more substantially than those with lower density

Follow these guidelines regarding portion size:

Food Category	USDA Serving Size[18]	Helpful Hint (WebMD):
Protein	1 ounce of meat 1 egg	• Meat is the size of a deck of cards
Carbohydrates/Grains	1 ounce equivalent: • 1 slide of bread • 1 cup of cereal • ½ cup rice or pasta	• Pasta is about the size of a scoop of ice cream • Potato is about the size of a computer mouse • Bagel is the size of a hockey puck • Pancake is the size of a CD

Plan-specific portions are included in your **Complete Food Guide.**

What is the proper portion size? (2)

Food Category	USDA Serving Size[18]	Helpful Hint (WebMD):
Dairy	1 cup	• ~1/2 glass milk • 1 container of yogurt (8 oz) • 1 slice of milk-based cheese • Cheese cubes the size of a pair of dice
Fruits and Vegetables	1 cup	• In general, the size of your fist • 1 small banana (less than 6”) • Apple/orange/peach the size of a baseball • 16 seedless grapes • 8 large strawberries • 2 large plums
Fats/Oils	Varies by use	• 1 tsp. of olive oil • 1 tbsp. of peanut butter • 1 tbsp. of salad dressing • ¼ of a medium avacado

Plan-specific portions are included in your **Complete Food Guide.**

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If I follow the OnPoint system, what will my weight loss look like?

We know that you want to lose weight fast. However, research has demonstrated that people who achieve gradual weight loss are more likely to keep it off. Our methodology targets:

- 1-2 lbs per week for men
- ~1 lb per week for women

Initial weight loss goals usually represent 10% of total body weight, as individuals regularly plateau without further changes to their diet. As you lose weight, the total energy that your body needs also decreases. Therefore, as you lose weight, we will monitor the amount of food needed to sustain gradual weight loss.

- Total calorie deficits (consumed – burned) of 500-1000 per day translates into theoretical weight loss of 1-2 lbs per week (26-52 lbs per year)
- Recent evidence also shows that more rapid weight loss does not achieve better results over a 1-year period
- Implementing a "very-low" calorie diet will deprive your body of the macro-nutrients and vitamins it needs to maintain normal health

Takeaway: Gradual weight loss gives you the best chance to *keep it off*!

Source: NIH – Clinical Guidelines… (15)

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Once my weight is gone, how can I keep it off?

The scientific community defines successful weight maintenance as 10% weight reduction, maintained for at least one year. We know how hard this can be! The following activities will position you to keep your weight off:

1. Remain focused on what you eat
2. Maintain consistent eating habits
   - ✓ Continue to eat breakfast
   - ✓ Don't relax your eating standards on the weekends. They may corrupt your normal routine
3. Continue to weigh yourself at regular intervals
   - ✓ Don't stress out if you gain a few pounds. Use this information to further tailor your diet to return to your target weight

We hope that the community here at OnPoint helps you transform your habits to support a healthy you. We are committed to helping you lose weight, keep it off, and surround you with staff and other clients who share your common goal.

Source: Long-Term Weight Loss Maintenance (14)

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Appendix – Diet Composition

Study	**Energy of Dietary Composition on Energy Expenditure During Weight-Loss Maintenance[1]**
Publication	Ebbeling et al., JAMA (2012) Vol 307 No. 24: 2627-2634
Subjects	21 individuals (age 18-40) over a 12-week test phase
Conclusion(s)	• Those who consumed a very low-carbohydrate diet during weight loss maintenance maintained higher resting-energy expenditure (REE) and total-energy expenditure (TEE) levels • HDL and triglyceride levels were lowest in the very-low carbohydrate test group • Hunger scores did not significantly differ among the very-low carb, low-fat, and low-glycemic index test groups
Study	**Changes in Diet and Lifestyle and Long Term Weight Gain in Women and Men[2]**
Publication	Mozaffarian et al., The New England Journal of Medicine (2011) Vol 364 No. 25: 2392-404
Subjects	120,887 US women and men from 1986-2006
Conclusion(s)	• Average weight gain for each cohort of observations was 3.35 lbs per 4-year period • Dietary factors associated with the largest positive associations with weight changes were potato chips, potatoes, sugar-sweetened beverages, unprocessed red meats, and processed meats • Inverse relationships with weight gain were seen for vegetables, whole grains, fruits, nuts and yogurt • Researchers suggest that the negative correlation between high fiber foods and weight gain is caused by slower digestion, and results in higher satiety and eventual displacement of more highly-processed foods

Appendix – Diet Composition (2)

Study	**Effect of an Energy-Restricted, High-Protein, Low-Fat Diet Relative to a Conventional High-Carbohydrate, Low-Fat Diet on Weight Loss…**[3]
Publication	Noakes et al., American Journal of Clinical Nutrition (2005) Vol 81: 1298-306
Subjects	100 women (age 40-60) over a 12-week period
Conclusion(s)	• Each group, a high-protein (HP) and high-carbohydrate (HC) lost significant amount of weight versus their starting level • There was no significant difference in weight loss among the two groups, although women with high triglyceride levels lost more weight under the HP diet • Both diets resulted in significantly lower levels of LDL-cholesterol, HDL-cholesterol, glucose, insulin and free fatty-acids • The HP diet increased vitamin B-12 levels
Study	**Weight Loss With a Low-Carbohydrate, Mediterranean, or Low-Fat Diet**[4]
Publication	Shair et al., The New England Journal of Medicine (2008) Vol 359 No 3: 229-41
Subjects	322 individuals (age 40-65) over a 2-year period
Conclusion(s)	• Individuals following a low-carbohydrate diet (no caloric cap) or Mediterranean diet (caloric cap) lost significantly more weight than those assigned to a low-fat diet, with the low-carb diet losing the most weight • HDL cholesterol levels increased the most in the low-carb group, while LDL levels did not change significantly within any of the groups • Blood pressure and insulin levels decreased in each test group, with the smallest decrease observed in the low-fat diet

Appendix – Diet Composition (3)

Study	**A Randomized Controlled Trial of a Moderate-Fat, Low-Energy Diet Compared with a Low Fat, Low Energy Diet for Weight Loss in Overweight Adults**[5]
Publication	McManus et al., International Journal of Obesity (2001) Vol 25: 1503-1511
Subjects	100 individuals (age 18-70) over an 18-month period
Conclusion(s)	• Individuals in the moderate-fat group, on average, lost more weight, had a greater reduction in percentage body fat, BMI, and waist circumference • The majority of weight loss took place in the first 6 months; weight loss was then maintained in the moderate-fat group, and regained in the low-fat group • Researchers hypothesize that sustained weight maintenance was due to frequent weight counseling and Mediterranean-based meal guide

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Appendix – Meal Timing

	Meal Timing Matters!	It's Not That Important
Study	**Meal Timing, Appetite Scores, and Weight Loss Maintenance[6]**	**Weight Loss With Meal Replacement and Meal Replacement Plus Snacks: A Randomized Trial[7]**
Publication	Jakubowicz et al., Steroids (2012)	Poston et al., Intl Jrnl of Obesity (2005)
Subjects	193 individuals (age 20-65), over a 48 week period	100 individuals (age 35-55) over 24 weeks
Conclusion(s)	• People eating a low-carb breakfast (lcb) experienced more food cravings than those eating hi-carb, hi-protein breakfast (hcpb) • Both diet types experienced weight loss during the "dieting" period, but only the hcpb group experienced further weight loss during the maintenance period	• No significant difference in weight loss between "snacking" and "non-snacking" groups over both a 12- and 24- week interval • Both groups showed improvements in systolic blood pressure, cholesterol, glucose, and insulin levels over the 12-week period
Study	**Timing of Food Intake Predicts Weight Loss Effectiveness[8]**	**Increased Meal Frequency Does Not Promote Greater Weight Loss…[9]**
Publication	Garaulet et al., Intl Jrnl of Obesity (2013)	Cameron et al., British Journal of Nutrition (2010)
Subjects	510 adults (age 31-52), over a 20 week period, following a Mediterranean diet	18 individuals (age 18-55) over an 8 week period
Conclusion(s)	• Late lunch-eaters lost significantly less weight than early-eaters, beginning in the 5th week of study • This result occurred given equal energy intake and similar energy expenditure between the two groups	• No significant difference in weight loss between high-meal frequency (MF) and low-MF groups • No significant difference in appetite measures between the two test groups

Appendix – Meal Timing (2)

	Meal Timing Matters!	It's Not That Important
Study	**Association Between Eating Patterns and Obesity in a Free-Living US Adult Population[10]**	**Meal Frequency and Energy Balance[11]**
Publication	Ma et al., American Journal of Epidemiology (2003)	Bellisle et al., British Journal of Nutrition (1997)
Subjects	499 individuals (age 20-70) over a 52-week period	N/A: Journal Review
Conclusion(s)	• Number of eating episodes was inversely related to obesity (based upon average 3.92/day) • Skipping breakfast was associated with a significantly higher risk of obesity • Temporal distribution of meals throughout the day was not related to obesity • Eating breakfast and dinner away from the home was associated with higher rates of obesity, but not lunch	• Many relationships between meal frequency and obesity become non-significant when adjusted for possible confounders • Difficulty in classifying participants' meal frequency (due to under-reporting meals) make it difficult to determine statistically significant differences between test groups • Reverse-causality (skipping meals once the onset of obesity has occurred) can skew results • Review of 7 studies comparing nibbling v gorging regimens are inconclusive in regard to weight loss • Review of 5 studies comparing nibbling v. gorging regiments and energy expenditure show no significant differences between test groups

Appendix – Portion Control

Study	**Use of Portion-Controlled Entrees Enhances Weight Loss in Women[12]**
Publication	Hannum et al., Obesity Research (2004) Vol 12 No. 3: 538-546
Subjects	60 healthy women (age 24-60) over an 8-week period
Conclusion(s)	• Both the pre-packaged food group and the self-selecting meal group lost a statistically significant quantity of weight compared to starting levels; the pre-packaged group lost significantly more weight than the self-selecting group • Portion-controlled weight loss regimens using prepackaged entrees are both effective and acceptable on a short-term basis • The average weight loss in the portion-controlled group (12.5 lbs) was observed alongside significant reductions in fat mass, waist circumference, total cholesterol, and fasting insulin
Study	**Reductions in Portion Size and Energy Density of Foods are Additive and Lead to Sustained Decreases in Energy Intake[13]**
Publication	Rolls et al., American Journal of Clinical Nutrition (2006) Vol. 83: 11-17
Subjects	24 women (age 19-45) over a 4-week period
Conclusion(s)	• Decrease in portion size and energy density of food were each independently associated with decreased energy intake of the entire meal • Decrease in energy density of food had a greater influence on reduction of meal energy intake • The combined effect of portion size and energy density within meals deceased overall energy intake by 32.4%. Although subjects were free to eat as much food as they desired, they chose to consume 1625 kcal less over 2-day test periods

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USDA Portion Guidelines

Protein: http://www.choosemyplate.gov/printpages/MyPlateFoodGroups/ProteinFoods/food-groups.protein-foods-counts.pdf

Carbohydrates/Grains: http://www.choosemyplate.gov/food-groups/grains_counts_table.html

Dairy: http://www.choosemyplate.gov/food-groups/dairy-counts.html

Fruits: http://www.choosemyplate.gov/printpages/MyPlateFoodGroups/Fruits/food-groups.fruits-counts.pdf

Vegetables: http://www.choosemyplate.gov/printpages/MyPlateFoodGroups/Vegetables/food-groups.vegetables-counts.pdf

Fats/Oils: http://www.choosemyplate.gov/printpages/MyPlateFoodGroups/Oils/food-groups.oils-count.pdf