

Nutrition Fact Sheet

An information update for WIC staff

■ POPULAR DIETS

Are your clients asking about current weight-loss plans and books, but you don't feel confident answering their questions? If so, this information will provide you with the basic premise behind each diet, as well as the diet's strengths and weaknesses. Be an informed educator!

LOW-CARBOHYDRATE, HIGH-PROTEIN DIETS

If you think many of today's most popular diets have a common theme, you are right. Among the plans most in vogue are low-carbohydrate, high-protein diets. Books like *The Zone*, *Dr. Atkins' New Diet Revolution*, and *The South Beach Diet* argue that bad carbohydrates are making Americans fat.

Book: *Dr. Atkins' New Diet Revolution*

Author: Robert C. Atkins

Background: Medical doctor

Diet characteristics and claims:

- Eating too many carbohydrates causes obesity and other health problems. A low-carbohydrate diet leads to less hunger and results in a metabolic advantage.
- Four phases: induction, ongoing weight loss, pre-maintenance, lifetime maintenance.
- Foods included in diet plan: seafood, poultry, meat, eggs, cheese, salad vegetables, oils, butter, cream; later phases of the diet include limited amounts of nuts, fruits, wine, beans, other vegetables, whole grains.
- Foods to avoid: fruit, bread, grains, starchy vegetables, dairy products other than cheese, cream, or butter.

Strengths:

- Triglycerides in the blood (a measure of fat)

may decrease due to limited carbohydrate intake (refined carbohydrates can increase triglycerides).

- High fat intake provides satiety for a long period of time.

Weaknesses:

- Nutritionally unbalanced. Very low in carbohydrates (recommendations as low as 15 grams/day, when the RDA for adults is at 130–210 grams — at the higher end of the range when pregnant or breastfeeding). Low amounts of fiber, calcium, magnesium, potassium, iron, copper, thiamine, vitamin D, vitamin C.
- Lacks fiber, vegetables, and fruits (which contain phytochemicals and antioxidants); may raise the risk of heart disease, stroke, cancer, diverticulosis, and constipation.
- High in saturated fat and cholesterol, which can increase the risk of cardiovascular disease.
- Too much red meat (which is not limited in the diet) may raise the risk of colon or prostate cancer.

Comments:

- Initial weight loss is from water weight as the body breaks down carbohydrate stores to use for energy.
- Long-term safety is not established.

- Does not provide a nutritionally varied eating plan.

Book: Enter the Zone

Author: Barry Sears

Background: Ph.D. in biochemistry

Diet characteristics and claims:

- The author suggests that the right combination of foods leads to an advantageous metabolic state — 40 percent carbohydrate, 30 percent protein, 30 percent fat.
- High-carbohydrate diets cause overproduction of insulin, destroying eicosanoids (“powerful hormones” per the author).
- Promotes eating monounsaturated fats, low-fat protein, low-glycemic-index carbohydrates,* high-fiber fruits and vegetables; alcohol in moderation, exercise, and smoking cessation.
- Limits pasta, bread, bananas, rice, potatoes, papaya, corn, carrots, some fruits, fruit juice, saturated fat.

Strengths:

- Promotes eating regular meals low in calories.
- Restricts fat to no more than 30 percent of total calories, and monounsaturated fats are considered a “healthy” fat in moderation.
- Some of the recommendations could be helpful for people with metabolic syndrome — these clients should work with a registered dietitian and physician for guidance.

* Glycemic index — the relative rate at which sugar appears in the blood after eating a carbohydrate food. High-glycemic-index foods raise blood sugar faster than low-glycemic-index foods.

Weaknesses:

- The majority of the claims made in *Enter the Zone* have not been validated scientifically and are supported only by testimonials and poorly conducted studies.
- Deficient in vitamins and minerals, such as vitamin D, vitamin E, magnesium, and calcium.
- Low in phytochemicals and antioxidants, which promote health.

Comments:

- There is nothing magical about the diet; it is just a very low-calorie diet.
- The author exaggerates evidence that the diet is the key to weight loss and implies that the diet can cure virtually every disease.
- Does not provide a nutritionally sound eating plan.

Book: Protein Power

Authors: Michael and Mary Eades

Background: Medical doctors

Diet characteristics and claims:

- Insulin and glucagons are hormones responsible for regulating metabolism. Insulin promotes deposition of body fat, and glucagons triggers the breakdown of body fat for energy.
- Limits intakes of carbohydrates to lower insulin levels, which the authors claim is responsible for many health problems.
- Foods allowed: all types of meat, many non-starchy vegetables, small portions of fruit, very small amounts of dairy, grains, and dried beans.
- Foods to limit: cereal, bread, rice, pasta, carrots, banana, corn, lima beans, peas, popcorn, refined sugar, large portions of fruit or juice.

Strengths:

- Allows more fruits and vegetables than other high-protein diets.

Weaknesses:

- High in saturated fat and cholesterol, which can increase the risk of cardiovascular disease.
- Restricts whole grains and legumes — foods that fit into a healthy diet.
- Low in vitamins and minerals, such as fiber, calcium, copper, iron, magnesium, potassium, zinc, thiamine, vitamin B₆, vitamin D, vitamin E.

Comments:

- Information presented in the book is based on anecdotal evidence observed in the author’s population, not scientific evidence.
- Does not provide a nutritionally sound eating plan.

Book: Sugar Busters! Cut the Sugar to Trim Fat

***Authors:* H. Leighton Steward, Morrison Bethea, Sam Andrews, and Luis Balart**

***Background:* Medical doctors and corporate CEO**

Diet characteristics and claims:

- Sugar is toxic, stimulating insulin secretion, which tells our bodies to create, store, and hold fat.
- To lose weight, eliminate refined sugar and other high-glycemic-index carbohydrates.
- Promotes eating low glycemic index–high fiber carbohydrates, lean meats, and low-fat dairy products.
- Foods to avoid: refined sugar, highly processed grain products, white rice, corn, potatoes, beets, carrots, saturated fats. Fruit is limited.

Strengths:

- Restriction of sugar and other refined carbohydrates is one component of a healthy diet.
- Research has linked diets high in refined sugars with obesity, dental caries, and overall poorer diet quality. Reducing the amount of refined sugars consumed may lower the risk for these health problems.

Weaknesses:

- Low in some vitamins and minerals, including vitamin A, calcium, vitamin D.
- Low in fiber, phytochemicals, and antioxidants, which promote health.
- High in saturated fat and cholesterol, which can increase the risk of cardiovascular disease.
- Recommends not drinking “excessive” fluids (water) with meals. However, there is no evidence that supports the claim that fluids “bypass proper chewing” and “dilute digestive juices.”

Comments:

- The theory of carbohydrate consumption and resulting insulin response as a cause of weight gain has become popular in fad diets, but there is no evidence that the release of insulin causes obesity in people with normal metabolic and pancreatic function.
- Insulin promotes excess fat storage when too many calories are being consumed.
- Insulin plays an essential role in energy balance, and carbohydrates are important in the diet.
- Obesity is more likely a result of a decline in physical activity and an increase in calorie intake than increased sugar or carbohydrate consumption alone.

- Evidence is based on opinions, not proven scientific facts, and some claims are false.
- The authors mention that protein foods and fats should also be limited. However, some of the recipes do not follow that advice, such as the filet mignon recipe for four that includes four 10-ounce filets, a cup of blue cheese, and a half-pound of bacon.
- Does not provide a nutritionally sound eating plan.

Book: *The South Beach Diet*

Author: Arthur Agatston

Background: Cardiologist

Diet characteristics and claims:

- A lower-carbohydrate diet made up of three phases; each phase allows more carbohydrates.
- Uses the glycemic index to group carbohydrates into “good” and “bad” categories.
- Proposes that switching to good carbohydrates stops insulin resistance, cures cravings, and causes weight loss.
- Protects the heart and prevents hunger by promoting “good fats.”
- Foods to include: seafood, chicken breast, lean meat, low-fat cheese, most vegetables, nuts, oils; (later in the program) whole grains, most fruits, low-fat milk or yogurt, beans.

Strengths:

- A lower-carbohydrate eating plan that fairly resembles most healthful-eating guidelines recommended by leading health authorities.
- Backed by solid evidence on fats and heart disease.
- Includes mostly healthful foods.

Weaknesses:

Restricts carrots, bananas, pineapple, and watermelon because they have a high glycemic index. These foods provide nutrients that have health-promoting benefits, and can be included in a healthy, balanced diet.

Comments:

- The theory behind the South Beach Diet is that, the faster sugars and starches are digested, the more weight is gained. Instead, the diet will cause weight loss because it is a low-calorie plan with an average intake of about 1400 to 1500 calories per day — much less than most Americans are currently consuming.
- The diet’s first phase promotes potentially dangerous accelerated weight loss; however, the second and third phases emphasize whole grains, lean proteins and dairy, unsaturated fats, and fruits and vegetables, in addition to consistent mealtimes and plenty of water — all components of a healthy diet.

Frequently Asked Questions about Low-Carbohydrate, High-Protein Diets

Do they help people lose more weight than a traditional weight-loss plan?

- Two recent studies have reported that people lost more weight after six months on an Atkins-type diet than on a typical diet. However, after 12 months, there was no difference in the amount of weight lost.
- Weight loss is a result of eating fewer calories, or burning more calories through physical activity, than your body needs. The body uses energy for three main purposes: basal metabolism, physical activity, and the thermic effect of food.

Basal metabolism represents the minimum energy (measured in calories) that is used to keep the body alive. It includes maintaining a heartbeat, respiration, temperature, and other functions, and represents 60–70 percent of the total energy used by the body. Physical activity, such as walking, increases energy expenditure above and beyond the basal metabolism by as much as 25 to 40 percent. Increased activity leads to an increase in energy burned. In addition to basal metabolism and physical activity, the body uses energy to digest, absorb, and process nutrients — called the thermic effect of food; this represents 5–10 percent of energy consumed.

There is nothing magical about the low-carbohydrate diets; they are merely very low in calories, especially in the beginning phases. The diets are usually so low in calories that they put dieters into negative calorie balance.

In addition, during the first few weeks, the quick weight loss is a result of water loss, not body-fat loss. One of the reasons that water loss occurs is that the body breaks down energy stores; one of the by-products of that process is water.

- It may be easier for some people to follow a low-calorie plan while on a high-protein diet because the allowed foods make them feel full. Fat and protein are more satiating than carbohydrates alone. However, many of the high-protein, high-fat diet plans are very structured and strict, which can lead to monotony. In turn, this can lead to boredom and a decreased intake.
- As with all fad diets, people return to their old eating habits and regain the weight they have lost.
- Many of these diets are so low in

carbohydrates that they put the body in a metabolic state called *ketosis*. When the body does not have carbohydrates to use for energy — the preferred fuel for the body — it finds other sources of energy in the body. One of them is fat. The body burns fat all the time but, without carbohydrates, the body does not burn fat completely, and substances called ketones are formed and released in the blood; *ketosis* is the name for this metabolic process. Ketosis may make dieting easier for some people because it often suppresses appetite. Common side effects of ketosis are fatigue, constipation, nausea, and “acetone breath,” which is described as having an odor that is a cross between nail polish and overripe pineapple. Long-term ketosis places stress on the body and can lead to kidney damage, gout, and other problems.

Are these diets safe?

- It is important to remind clients that glucose is a simple carbohydrate derived from the breakdown of more complex carbohydrates; it is our body’s preferred energy source, and the primary energy source for the brain.
- Low-carbohydrate, high-protein diets are usually not nutritionally balanced enough for the needs of pregnant and breastfeeding women or children. In addition, low-carbohydrate diets are low in folate. All women of childbearing age need to ensure they receive adequate folate from their diet, in conjunction with folic acid from supplementation, to prevent neural-tube defects. Since weight loss is not indicated during pregnancy, a low-carbohydrate, high-protein diet would not be recommended unless there is a medical condition that warrants it. In that case, the client would need to work with an M.D. or R.D. for guidance.

- Low-carbohydrate diets during lactation have the potential to decrease milk supply and change the taste and smell of the milk.
- Over an extended period of time, high-protein, low-carbohydrate (and often high-fat) diets can cause health problems, such as heart disease, osteoporosis, certain cancers, and kidney problems.
 - When excess protein, especially animal protein, is eaten for an extended time, the body flushes more calcium out through urine, which may contribute to osteoporosis.
 - Numerous studies show that a diet rich in whole grains, fruits, vegetables, and healthful fats protects the body from heart disease and many types of cancer. Conversely, diets high in fat, saturated fat, and cholesterol have been shown to increase the risk of disease.
- There are no long-term studies that show that low-carbohydrate dieting is more effective than any other reduced-calorie diet. In addition, studies have not been completed to ensure the diets' safety for long-term health.

What should I tell a client who wants to follow a low-carbohydrate diet plan or put her child on a low-carbohydrate plan?

- If weight loss is appropriate and indicated, congratulate the client for wanting to make changes toward a healthy weight.
 - Discuss reasons the diet is not the best plan for long-term weight loss, including safety.
 - Discuss the concept of weight loss: calories in vs. calories out.
 - Offer counseling and educational materials to promote healthy weight loss. DSHS materials include: *Eat Well, Be Well*, stock no. 13-169 (A, V); *Fit Families — Bounce Back*, stock no. 13-06-11621 (A); *Healthy Moms for Healthy Babies*, stock no. 13-66 (A, V); *Help Your Child Have a Healthy Weight*, stock no. 13-75 (A, V).
 - Refer to the local agency's registered dietitian if the client desires more in-depth counseling.
 - Refer to the client's doctor for medical clearance before starting any weight-loss plan.
- If the client *insists* on following a low-carbohydrate diet, then recommend the most balanced diet approach, e.g., the South Beach Diet.
- If weight-loss or low-carbohydrate diets are not appropriate (see above, "Are these diets safe?") discuss this fact and the reasons with the client.
 - Refer to the local agency's registered dietitian for more in-depth counseling.
 - Refer the client to her doctor if appropriate.

OTHER POPULAR DIETS

Not all contemporary diets are of the low-carbohydrate, high-protein type. Here are a few others that may be popular with your clients.

Book: Eat Right for Your Blood Type

Author: Peter D'Adamo

Background: Naturopathic physician

Diet characteristics and claims:

- Claims that people absorb nutrients and react to foods differently depending on blood type, which is based on our prehistoric ancestors.
- Based on blood type:
 - *Type O*: Eat mostly meats, seafood,

fruits, vegetables (limit: wheat, oats, beans, dairy).

- *Type A*: Eat mostly fruits, vegetables, beans, dairy, seafood (limit: meat, dairy, wheat).
- *Type B*: Eat oat and rice flours, meats, dairy, beans, fruit, vegetables (limit: chicken, wheat).
- *Type AB*: Eat seafood, fruits, vegetables, dairy, oats, and rice (limit: red meat).

Strengths:

- Very few.

Weaknesses:

- Depending on blood type, whole food groups are eliminated; therefore, some essential nutrients are missing or low.
- The claims the author makes about the diet may convince people to use these diets to treat cancer, asthma, infections, diabetes, arthritis, hypertension, and infertility.

Comments:

There is no scientific evidence for using blood type as an eating guide for losing weight. There are no data showing that prehistoric people with any particular blood type ate this way, which is what the author claims.

Book: *The Ultimate Weight Solution*

Author: Phil McGraw

Background: Psychologist

Diet characteristics and claims:

- The theme of this program is that behavior modification and cognitive restructuring, along with a healthful diet and exercise, can lead to permanent weight management.
- The program's key points offer behavioral and nutritional advice, ranging from portion control to supplement

recommendations.

- Foods that take time to prepare and chew lead to weight loss.
- Foods included: seafood, poultry, meat, low-fat dairy, whole grains, most vegetables, fruits, and a limited amount of oils.
- Foods to avoid: fatty meats, sweets, refined grains, full-fat dairy, microwavable entrees, and fried foods.

Strengths:

- Mostly healthful foods included.
- Uses behavior modification.

Weaknesses:

- Some of the book's points contain erroneous or outdated nutrition and dietary recommendations.
- Gives no menus, recipes, or advice on how much of what to eat.
- Readers are encouraged to buy Dr. Phil's expensive, questionable supplements, bars, and shakes.

Comments:

The advice given relies more on Dr. Phil's opinion than on strong science.

Plan: Cabbage Soup Diet

No specific author; found on many Web sites that promote fad diets and quick weight loss.

Diet characteristics and claims:

- Eat as much cabbage soup as desired (recipe provided) for seven days.
- Each day during the seven-day program, there are specific foods that must be eaten, such as fruits, vegetables, brown rice, and beef.

Strengths:

- Very few.
- Allows fruits and vegetables on certain days.

Weaknesses:

- Diet is too low in complex carbohydrates, protein, vitamins, and minerals.
- Potentially unsafe.

Comments: Not nutritionally balanced and does not teach any habits that can be maintained for long-term weight management.

Plan: Hollywood Diet

No specific author; found on many Web sites that promote fad diets and quick weight loss.

Diet characteristics and claims: Purchase the 32-ounce Hollywood Diet juice (up to \$24.95 per order) and drink only the juice and water for 48 hours.

Strengths:

- None.

Weaknesses:

- Nutritionally incomplete.
- Expensive.
- Potentially unsafe.

Comments:

- Not nutritionally balanced and does not teach any habits that can be maintained for long-term weight management.
- If people lose weight from this diet, it will only be water weight from fasting. Once they start eating, they will gain the weight back.
- Does not provide a nutritionally sound eating plan.

WEIGHT LOSS: THE BOTTOM LINE

- The most effective way to lose weight and to permanently maintain weight loss over time is to reduce calorie intake, follow a healthful, balanced diet (a varied diet of fruits, vegetables, complex carbohydrates, low-fat dairy, and lean protein), and stay active every day.
- Weight-loss strategies should encourage setting realistic goals and making permanent lifestyle changes that affect eating habits.
- Lifestyle changes should be balanced, realistic, and enjoyable to ensure that they can be maintained for life.

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QUIZ QUESTIONS

1. **This diet includes four phases of low carbohydrate intake: Induction, Ongoing Weight Loss, Pre-Maintenance, Lifetime Maintenance.**
 - a. South Beach Diet
 - b. Cabbage Soup Diet
 - c. Sugar Busters! Diet
 - d. Dr. Atkins’ New Diet Revolution
2. **This diet claims that people absorb nutrients and react to food differently depending on their blood type.**
 - a. The Ultimate Weight Solution
 - b. Eat Right for Your Blood Type
 - c. South Beach Diet
 - d. Hollywood Diet
3. **There is scientific proof to support that the right combinations of foods (40 percent carbohydrate, 30 percent protein, 30 percent fat) lead to an advantageous metabolic state, as claimed in “Enter the Zone.”**

_____ true
_____ false

4. **When you lose weight quickly (more than 1–2 pounds per week), the majority of weight lost will be from fat.**

_____ true
_____ false

5. **Glucose is the primary energy source for the brain.**

_____ true
_____ false

6. **What is the best advice that you can give to someone who wants to lose weight (assuming it is safe for the person to do so)?**

Answers
1. d 2. b 3. false 4. false 5. true