

Hypoglycemic Lifestyle:

Discover How To Effectively Live With Hypoglycemia



By Dr. David J. Castle, Ph.D.
America's #1 Expert on Hypoglycemia

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**Dedicated to my parents,
Donald and Charlotte Castle**



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Introduction

In 1998, I was diagnosed with hypoglycemia. It was very difficult to adjust to this new lifestyle because I had to implement a special diet. Over the years, with help from doctors, dieticians, and family, I have been able to develop a successful hypoglycemic diet. This diet allows me to properly regulate my blood sugar and feel great all day.

The diet and lifestyle tips that are shared in this book have helped me and I hope that they also help you effectively live with hypoglycemia.

Sincerely,

A handwritten signature in black ink that reads "David J. Castle". The signature is written in a cursive, slightly slanted style.

Dr. David J. Castle, Ph.D.
President
<http://www.hypoglycemiadiet.org>

Section 1

What is Hypoglycemia?

Hypoglycemia, also called low blood sugar, occurs when your blood glucose (blood sugar) level drops too low to provide enough energy for your body's activities. In adults or children older than 10 years, hypoglycemia is uncommon except as a side effect of diabetes treatment, but it can result from other medications or diseases, hormone or enzyme deficiencies, or tumors.

Glucose, a form of sugar, is an important fuel for your body. Carbohydrates are the main dietary sources of glucose. Rice, potatoes, bread, tortillas, cereal, milk, fruit, and sweets are all carbohydrate-rich foods.

After a meal, glucose molecules are absorbed into your bloodstream and carried to the cells, where they are used for energy. Insulin, a hormone produced by your pancreas, helps glucose enter cells. If you take in more glucose than your body needs at the time, your body stores the extra glucose in your liver and muscles in a form called glycogen. Your body can use the stored glucose whenever it is needed for energy between meals. Extra glucose can also be converted to fat and stored in fat cells.

When blood glucose begins to fall, glucagon, another hormone produced by the pancreas, signals the liver to break down glycogen and release glucose, causing blood glucose levels to rise toward a normal level. If you have diabetes, this glucagon response to hypoglycemia may be impaired, making it harder for your glucose levels to return to the normal range.

Symptoms

Symptoms of hypoglycemia include

- hunger
- nervousness and shakiness
- perspiration
- dizziness or light-headedness
- sleepiness
- confusion
- difficulty speaking
- feeling anxious or weak

Hypoglycemia can also happen while you are sleeping. You might

- cry out or have nightmares
- find that your pajamas or sheets are damp from perspiration
- feel tired, irritable, or confused when you wake up

Hypoglycemia: A Side Effect of Diabetes Medications

Hypoglycemia can occur in people with diabetes who take certain medications to keep their blood glucose levels in control. Usually hypoglycemia is mild and can easily be treated by eating or drinking something with carbohydrate. But left untreated, hypoglycemia can lead to loss of consciousness. Although hypoglycemia can happen suddenly, it can usually be treated quickly, bringing your blood glucose level back to normal.

Causes of Hypoglycemia

In people taking certain blood-glucose lowering medications, blood glucose can fall too low for a number of reasons:

- meals or snacks that are too small, delayed, or skipped
- excessive doses of insulin or some diabetes medications, including sulfonylureas and meglitinides (Alpha-glucosidase inhibitors, biguanides, and thiazolidinediones alone should not cause hypoglycemia but can when used with other diabetes medicines.)
- increased activity or exercise
- excessive drinking of alcohol

Prevention

Your diabetes treatment plan is designed to match your medication dosage and schedule to your usual meals and activities. If you take insulin but then skip a meal, the insulin will still lower your blood glucose, but it will not find the food it is designed to break down. This mismatch might result in hypoglycemia.

To help prevent hypoglycemia, you should keep in mind several things:

- **Your diabetes medications.** Some medications can cause hypoglycemia. Ask your health care provider if yours can. Also, always take medications and insulin in the recommended doses and at the recommended times.

What to Ask Your Doctor About Your Diabetes Medications

- Could my diabetes medication cause hypoglycemia?
- When should I take my diabetes medication?
- How much should I take?
- Should I keep taking my diabetes medication if I am sick?
- Should I adjust my medication before exercise?

- **Your meal plan.** Meet with a registered dietitian and agree on a meal plan that fits your preferences and lifestyle. Do your best to follow this meal plan most of the time. Eat regular meals, have enough food at each meal, and try not to skip meals or snacks.
- **Your daily activity.** Talk to your health care team about whether you should have a snack or adjust your medication before sports or exercise. If you know that you will be more active than usual or will be doing something that is not part of your normal routine—shoveling snow, for example—consider having a snack first.
- **Alcoholic beverages.** Drinking, especially on an empty stomach, can cause hypoglycemia, even a day or two later. If you drink an alcoholic beverage, always have a snack or meal at the same time.
- **Your diabetes management plan.** Intensive diabetes management—keeping your blood glucose as close to the normal range as possible to prevent long-term complications—can increase the risk of hypoglycemia. If your goal is tight control, talk to your health care team about ways to prevent hypoglycemia and how best to treat it if it does occur.

Normal and target blood glucose ranges (mg/dL)

Normal blood glucose levels in people who do not have diabetes

Upon waking (fasting)

70 to 110

After meals

70 to 140

Target blood glucose levels in people who have diabetes

Before meals

90 to 130

1 to 2 hours after the start of a meal

less than 180

Hypoglycemia (low blood glucose)

70 or below

Treatment

If you think your blood glucose is too low, use a blood glucose meter to check your level. If it is 70 mg/dL or below, have one of these "quick fix" foods right away to raise your blood glucose:

- 2 or 3 glucose tablets
- 1/2 cup (4 ounces) of any fruit juice
- 1/2 cup (4 ounces) of a regular (**not diet**) soft drink
- 1 cup (8 ounces) of milk
- 5 or 6 pieces of hard candy
- 1 or 2 teaspoons of sugar or honey

After 15 minutes, check your blood glucose again to make sure that it is no longer too low. If it is still too low, have another serving. Repeat these steps until your blood glucose is at least 70. Then, if it will be an hour or more before your next meal, have a snack.

If you take insulin or a diabetes medication that can cause hypoglycemia, always carry one of the quick-fix foods with you.

Wearing a medical identification bracelet or necklace is also a good idea.

Exercise can also cause hypoglycemia. Check your blood glucose before you exercise.

Severe hypoglycemia can cause you to lose consciousness. In these extreme cases when you lose consciousness and cannot eat, glucagon can be injected to quickly raise your blood glucose level. Ask your health care provider if having a glucagon kit at home and at work is appropriate for you. This is particularly important if you have type 1 diabetes. Your family, friends, and co-workers will need to be taught how to give you a glucagon injection in an emergency.

Prevention of hypoglycemia while you are driving a vehicle is especially important. Checking blood glucose frequently and snacking as needed to keep your blood glucose above 70 mg/dL will help prevent accidents.

Hypoglycemia and Diabetes: Doing Your Part

Signs and symptoms of hypoglycemia can vary from person to person. Get to know your own signs and describe them to your friends and family so they will be able to help you. If your child has diabetes, tell school staff about hypoglycemia and how to treat it.

If you experience hypoglycemia several times a week, call your health care provider. You may need a change in your treatment plan: less medication or a different medication, a new schedule for your insulin shots or medication, a different meal plan, or a new exercise plan.

Hypoglycemia in People Who Do Not Have Diabetes

Two types of hypoglycemia can occur in people who do not have diabetes: reactive (postprandial, or after meals) and fasting (postabsorptive). Reactive hypoglycemia is not usually related to any underlying disease; fasting hypoglycemia often is.

Symptoms

Symptoms of both types resemble the symptoms that people with diabetes and hypoglycemia experience: hunger, nervousness, perspiration, shakiness, dizziness, light-headedness, sleepiness, confusion, difficulty speaking, and feeling anxious or weak.

If you are diagnosed with hypoglycemia, your doctor will try to find the cause by using laboratory tests to measure blood glucose, insulin, and other chemicals that play a part in the body's use of energy.

Reactive Hypoglycemia

In reactive hypoglycemia, symptoms appear within 4 hours after you eat a meal.

Diagnosis

To diagnose reactive hypoglycemia, your doctor may

- ask you about signs and symptoms
- test your blood glucose **while you are having symptoms** (The doctor will take a blood sample from your arm and send it to a laboratory for analysis. A personal blood glucose monitor **cannot** be used to diagnose reactive hypoglycemia.)
- check to see whether your symptoms ease after your blood glucose returns to 70 or above (after eating or drinking)

A blood glucose level of less than 70 mg/dL at the time of symptoms and relief after eating will confirm the diagnosis.

The oral glucose tolerance test is no longer used to diagnose hypoglycemia; experts now know that the test can actually trigger hypoglycemic symptoms.

Causes and Treatment

The causes of most cases of reactive hypoglycemia are still open to debate. Some researchers suggest that certain people may be more sensitive to the body's normal release of the hormone epinephrine, which causes many of the symptoms of hypoglycemia. Others believe that deficiencies in glucagon secretion might lead to hypoglycemia.

A few causes of reactive hypoglycemia are certain, but they are uncommon. Gastric (stomach) surgery, for instance, can cause hypoglycemia because of the rapid passage of food into the small intestine. Also, rare enzyme deficiencies diagnosed early in life, such as hereditary fructose intolerance, may cause reactive hypoglycemia.

To relieve reactive hypoglycemia, some health professionals recommend taking the following steps:

- eat small meals and snacks about every 3 hours
- exercise regularly
- eat a variety of foods, including meat, poultry, fish, or nonmeat sources of protein; starchy foods such as whole-grain bread, rice, and potatoes; fruits; vegetables; and dairy products
- choose high-fiber foods
- avoid or limit foods high in sugar, especially on an empty stomach

Your doctor can refer you to a registered dietitian for personalized meal planning advice. Although some health professionals recommend a diet high in protein and low in carbohydrates, studies have not proven the effectiveness of this kind of diet for reactive hypoglycemia.

Fasting Hypoglycemia

Diagnosis

Fasting hypoglycemia is diagnosed from a blood sample that shows a blood glucose level of less than 50 mg/dL after an overnight fast, between meals, or after exercise.

Causes and Treatment

Causes include certain medications, alcohol, critical illnesses, hormonal deficiencies, some kinds of tumors, and certain conditions occurring in infancy and childhood.

Medications

Medications, including some used to treat diabetes, are the most common cause of hypoglycemia. Other medications that can cause hypoglycemia include

- salicylates, including aspirin, when taken in large doses
- sulfa medicines, which are used to treat infections
- pentamidine, which treats a very serious kind of pneumonia
- quinine, which is used to treat malaria

If using any of these medications causes your blood glucose to drop, your doctor may advise you to stop using the drug or change the dosage.

Alcohol

Drinking, especially binge drinking, can cause hypoglycemia because your body's breakdown of alcohol interferes with your liver's efforts to raise blood glucose. Hypoglycemia caused by excessive drinking can be very serious and even fatal.

Critical Illnesses

Some illnesses that affect the liver, heart, or kidneys can cause hypoglycemia. Sepsis (overwhelming infection) and starvation are other causes of hypoglycemia. In these cases, treatment targets the underlying cause.

Hormonal Deficiencies

Hormonal deficiencies may cause hypoglycemia in very young children, but usually not in adults. Shortages of cortisol, growth hormone, glucagon, or epinephrine can lead to fasting hypoglycemia. Laboratory tests for hormone levels will determine a diagnosis and treatment. Hormone replacement therapy may be advised.

Tumors

Insulinomas, insulin-producing tumors, can cause hypoglycemia by raising your insulin levels too high in relation to your blood glucose level. These tumors are very rare and do not normally spread to other parts of the body. Laboratory tests can pinpoint the exact cause. Treatment involves both short-term steps to correct the hypoglycemia and medical or surgical measures to remove the tumor.

Conditions Occurring in Infancy and Childhood

Children rarely develop hypoglycemia. If they do, causes may include

- Brief intolerance to fasting, often in conjunction with an illness that disturbs regular eating patterns. Children usually outgrow this tendency by age 10.
- Hyperinsulinism, which is the excessive production of insulin. This condition can result in transient neonatal hypoglycemia, which is common in infants of mothers with diabetes. Persistent hyperinsulinism in infants or children is a complex disorder that requires prompt evaluation and treatment by a specialist.
- Enzyme deficiencies that affect carbohydrate metabolism. These deficiencies can interfere with the body's ability to process natural sugars, such as fructose and galactose, glycogen, or other metabolites.
- Hormonal deficiencies such as lack of pituitary or adrenal hormones.

Hope Through Research

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) was established by Congress in 1950 as one of the National Institutes of Health under the U.S. Department of Health and Human Services. The NIDDK conducts and supports research in diabetes, glucose metabolism, and related conditions. Researchers supported by NIDDK are investigating topics such as

- What are the causes of hypoglycemia?
- Can islet cell transplantation eliminate hypoglycemia?
- Can laparoscopy (a surgical procedure) be used to find and remove insulinomas (insulin-producing tumors)?
- Do new frequent-glucose-monitoring devices help prevent hypoglycemia?
- Why do repeated episodes of hypoglycemia lead to loss of awareness of hypoglycemia symptoms?

A complete listing of clinical research studies can be found at <http://ClinicalTrials.gov> on the Internet.

Points to Remember Diabetes-Related Hypoglycemia

- If you think your blood glucose is low, check it and treat the problem right away.
- To treat hypoglycemia, have a serving of a quick-fix food, wait 15 minutes, and check your blood glucose. Repeat the treatment until your blood glucose is above 70.
- Keep quick-fix foods in the car, at work—anywhere you spend time.
- Be careful when you are driving. Check your blood glucose frequently and snack as needed to keep your level above 70 mg/dL.

Hypoglycemia Unrelated to Diabetes

- In reactive hypoglycemia, symptoms occur within 4 hours of eating. People with this condition are usually advised to follow a healthy eating plan recommended by a registered dietitian.
- Fasting hypoglycemia can be caused by certain medications, critical illnesses, hereditary enzyme or hormonal deficiencies, and some kinds of tumors. Treatment targets the underlying problem.

Section 2

David's Hypoglycemic Diet

This diet has been highly successful at improving my lifestyle. I hope that you also have the opportunity to experience my success with this special diet. You will most likely not implement my exact diet but rather use it as a guide to help you create your own special hypoglycemic diet.

This chapter will let you know (1) what I eat and also (2) when I eat. Once again, this diet may need to be slightly modified to meet your needs but it is a great outline to follow to help you properly regulate your blood sugar.

DAVID'S HYPOGLYCEMIC DIET

1st Meal

***6:30AM (Scrambled eggs and toast)**

Includes:

- 3 eggs (three egg whites and one yolk)
- 1 piece of hard salami (round style)
- Glass of Water (approximately 16 ounces)
- Orange Juice/100% orange juice (approximately 3 ounces)
- Butter (small amount of regular margarine)
- 1 Brazil Nut
- 1 piece of 100% whole wheat bread (I use the Stone Hearth brand)

2nd Meal

***8:00AM (Fruit)**

Includes:

- 1 banana
- With your choice of strawberries, blue berries, raspberries or a kiwi
(Only have a small amount)

3rd Meal

*9:30AM (Chicken plate)

Includes:

- Approximately 4 strips of regular Purdue chicken (pre-cut version)
- Approximately 3 small carrots
- A few small pieces of red pepper
- A few oyster crackers
- 1 small 4 ounce glass of skim milk

4th Meal

*11:30AM (Soup)

Includes:

- 1 can of healthy choice soup with 1 gram of sugar or less (make sure that the soup has a: carbohydrate, vegetable and a protein included)

5th Meal

*1:30PM (Mostacholi)

Includes:

- 1 glass of water (approximately 16 ounces)
- 1 jar of tomato sauce (3 grams or less)
- 1 box of barilla elbows (1 gram of sugar)
- Ground Sirloin
- Fruit (I usually have a few strawberries)

6th Meal

*3:30PM (Pizza and Salad)

- 1 glass of water (approximately 16 ounces)
- ½ of a plain lender's bagel (toast this bagel)
- Tomato sauce (use the same sauce that was used above)
- Kraft mozzarella cheese
- Small 1 inch round pepperoni's (use 4 on pizza)
- Dole Salad (have a small bowl of salad)
- Strawberries (just have a couple)
- Hidden Valley "Light" Ranch salad dressing (only put a very small amount on salad)

7th Meal

*5:30PM (Dinner)

- 1 glass of water (approximately 16 ounces)
- You should have some: meat, vegetables, fruit, and carbohydrate
(There are four dinner examples in the Appendix)

8th Meal

*7:30PM (Peanut Butter Crackers)

- 1 glass of skim milk (approximately 3 ounces)
- 2 plain triscuit crackers
- Put a little bit of peanut butter on each cracker (I use Smucker's Natural Peanut Butter "Creamy"; this has only 1 gram of sugar)

9th Meal

*9:00PM (Cereal)

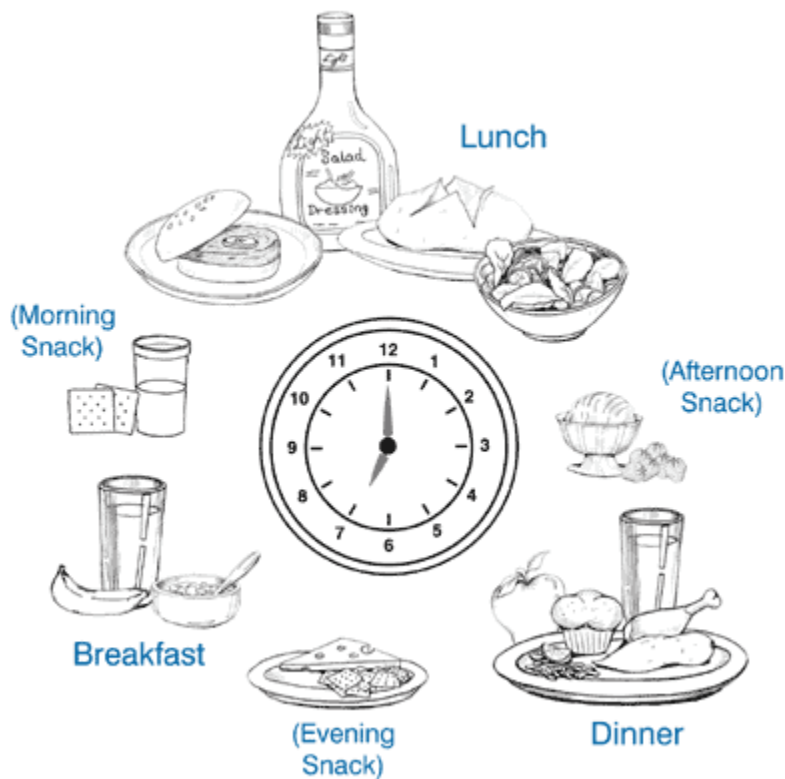
- 1 bowl of shredded wheat cereal (I eat Post Healthy Classics, "The Original Shredded Wheat")
- Use skim milk

Section 3

Design Your Personal Diet

How can I keep my blood glucose at a healthy level?

- Eat about the same amount of food each day.
- Eat your meals and snacks at about the same times each day.
- Do not skip meals or snacks.
- Take your medicines at the same times each day.
- Exercise at about the same times each day.



Why should I eat about the same amount at the same times each day?

Your blood glucose goes up after you eat. If you eat a big lunch one day and a small lunch the next day, your blood glucose levels will change too much.

Keep your blood glucose at a healthy level by eating about the same amount of carbohydrate foods at about the same times each day. Carbohydrate foods, also called carbs, provide glucose for energy. Starches, fruits, milk, starchy vegetables such as corn, and sweets are all carbohydrate foods.

Talk with your doctor or diabetes teacher about how many meals and snacks to eat each day. Print out these clock faces and draw hands on the clocks to show when to have your meals and, if necessary, snacks.



Breakfast



Morning Snack



Lunch



Afternoon Snack

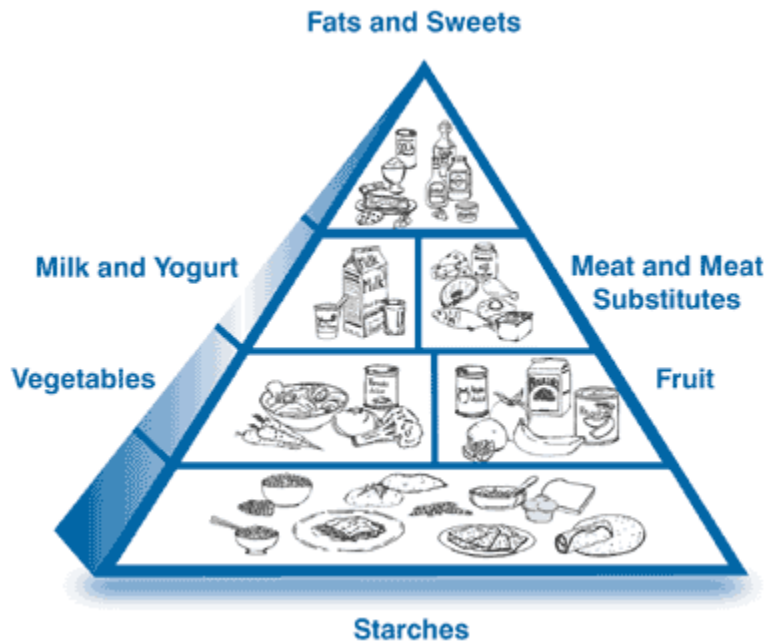


Dinner



Evening Snack

The Food Pyramid



Eat a variety of food to get the vitamins and minerals you need. Eat more from the groups at the bottom of the pyramid, and less from the groups at the top.

How much should I eat each day?

Have about **1,200 to 1,600 calories** a day if you are

- a small woman who exercises
- a small or medium woman who wants to lose weight
- a medium woman who does not exercise much

Choose this many servings from these food groups to have **1,200 to 1,600 calories** a day:

6 starches	2 milk and yogurt
3 vegetables	2 meat or meat substitute
2 fruit	up to 3 fats

Talk with your diabetes teacher to make a meal plan that fits the way you usually eat, your daily routine, and your diabetes medicines. Then make your own plan.

Have about **1,600 to 2,000 calories** a day if you are

- a large woman who wants to lose weight
- a small man at a healthy weight
- a medium man who does not exercise much
- a medium to large man who wants to lose weight

Choose this many servings from these food groups to have **1,600 to 2,000 calories** a day:

8 starches	2 milk and yogurt
4 vegetables	2 meat or meat substitute
3 fruit	up to 4 fats

Talk with your diabetes teacher to make a meal plan that fits the way you usually eat, your daily routine, and your diabetes medicines. Then make your own plan.

Have about **2,000 to 2,400 calories** a day if you are

- a medium to large man who does a lot of exercise or has a physically active job
- a large man at a healthy weight
- a large woman who exercises a lot or has a physically active job

Choose this many servings from these food groups to have **2,000 to 2,400 calories** a day:

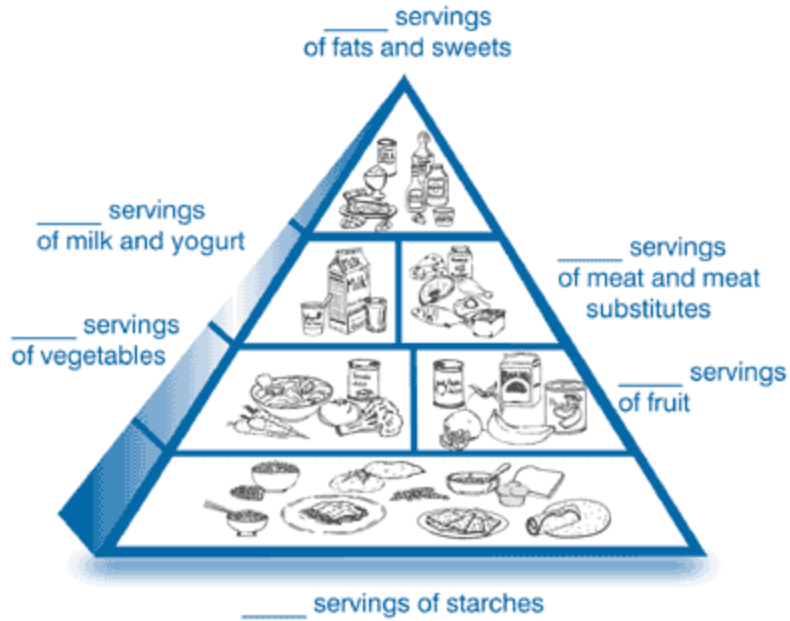
11 starches	2 milk and yogurt
4 vegetables	2 meat or meat substitute
3 fruit	up to 5 fats

Talk with your diabetes teacher to make a meal plan that fits the way you usually eat, your daily routine, and your diabetes medicines. Then make your own plan.

Make Your Own Food Pyramid

Print out this pyramid and fill in the numbers of servings next to the name of each food group.

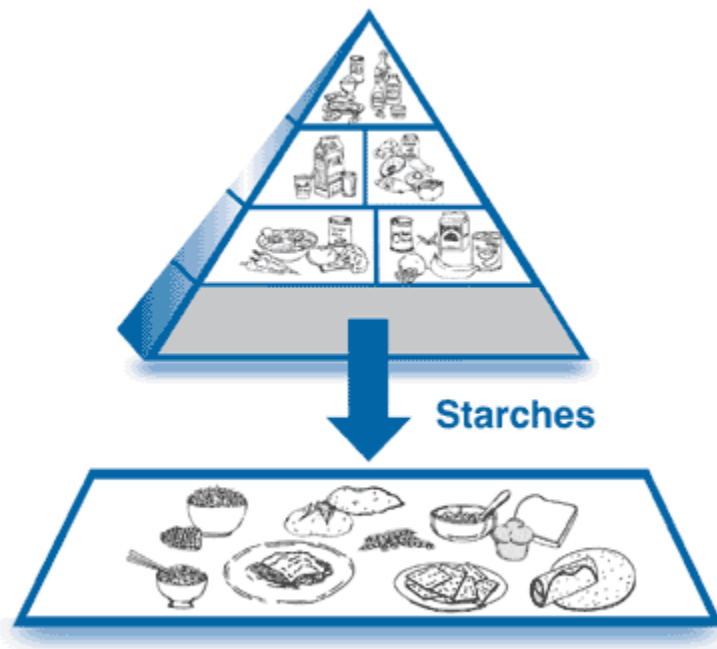
Each day, I need



Starches

Starches are bread, grains, cereal, pasta, or starchy vegetables like corn and potatoes. They give your body energy, vitamins, minerals, and fiber. Whole grain starches are healthier because they have more vitamins, minerals, and fiber.

Eat some starches at each meal. People might tell you not to eat starches, but that is not correct. Eating starches is healthy for everyone, including people with diabetes.

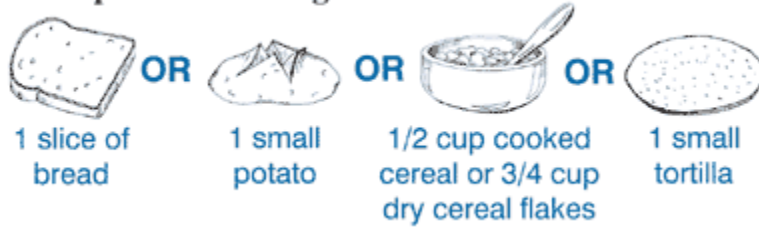


Examples of starches include

- bread
- pasta
- corn
- potatoes
- rice
- crackers
- tortillas
- beans
- yams

How much is a serving of starch?

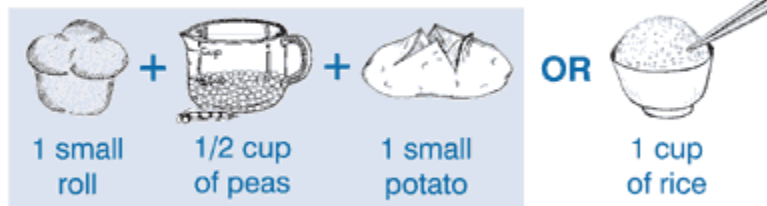
Examples of 1 serving:



Examples of 2 servings:



Examples of 3 servings:



If you have more than one serving at a meal, you can choose several different starches or have two or three servings of one starch.

Print out this chart. Then fill in the blanks with how many servings of starch to have at meals and snacks.

1. How many servings of grains, cereals, pasta, and starchy vegetables (starches) do you now eat each day?

I eat _____ starch servings each day.

2. Check how many servings of starches to have each day in the section on How much should I eat each day.

I will eat _____ starch servings each day.

To control your blood glucose, spread the servings you eat throughout the day.

3. I will eat this many servings of starches at

Breakfast _____

Snack _____

Lunch _____

Snack _____

Dinner _____

Snack _____

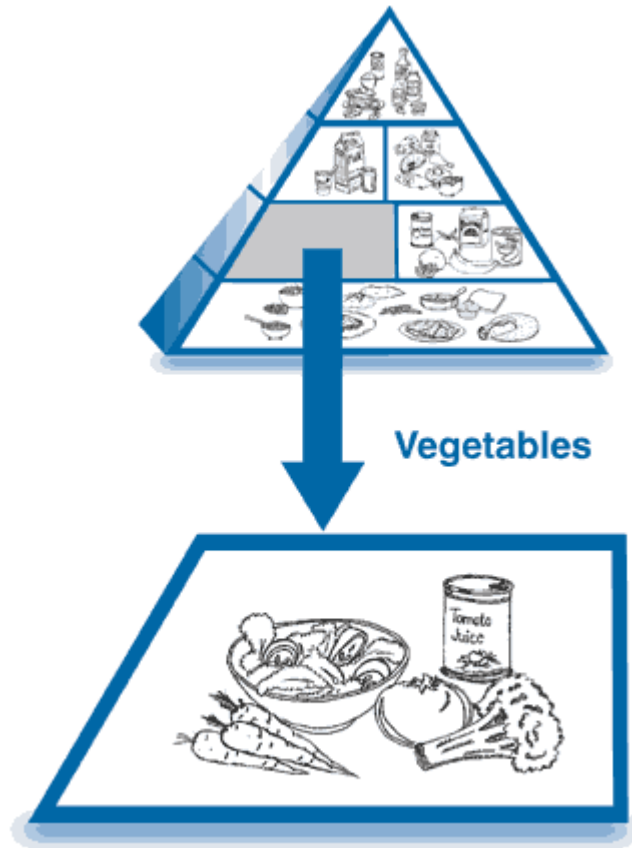
A diabetes teacher can help you with your meal plan.

What are healthy ways to eat starches?

- Buy whole grain breads and cereals.
- Eat fewer fried and high-fat starches such as regular tortilla chips and potato chips, french fries, pastries, or biscuits. Try pretzels, fat-free popcorn, baked tortilla or potato chips, baked potatoes, or low-fat muffins.
- Use low-fat or fat-free yogurt or fat-free sour cream instead of regular sour cream on a baked potato.
- Use mustard instead of mayonnaise on a sandwich.
- Use the low-fat or fat-free substitutes such as low-fat mayonnaise or light margarine on bread, rolls, or toast.
- Eat cereal with fat-free (skim) or low-fat (1%) milk.

Vegetables

Vegetables give you vitamins, minerals, and fiber, with very few calories.



Examples of vegetables include

- lettuce
- broccoli
- vegetable juice
- peppers
- carrots
- green beans
- salsa
- chilies
- greens

How much is a serving of vegetables?

Examples of 1 serving:



1/2 cup
cooked carrots

OR



1/2 cup
cooked
green beans

OR



1 cup
salad

Examples of 2 servings:



1/2 cup
cooked
carrots



1 cup
salad

OR



1/2 cup
vegetable
juice



1/2 cup
cooked
green beans

Examples of 3 servings:



1/2 cup
cooked
greens



1/2 cup cooked
green beans
and 1 small
tomato

OR



1/2 cup
broccoli



1 cup
tomato
sauce

If you have more than one serving at a meal, you can choose a few different types of vegetables or have two or three servings of one vegetable.

Print out this chart. Then fill in the blanks with how many servings of vegetables to have at meals and snacks.

1. How many servings of vegetables do you now eat each day?
I eat _____ vegetable servings each day.

2. Check how many servings of vegetables to have each day in the section on How much should I eat each day.
I will eat _____ vegetable servings each day.

To control your blood glucose, spread the servings you eat throughout the day.

3. I will eat this many servings of vegetables at

Breakfast _____

Snack _____

Lunch _____

Snack _____

Dinner _____

Snack _____

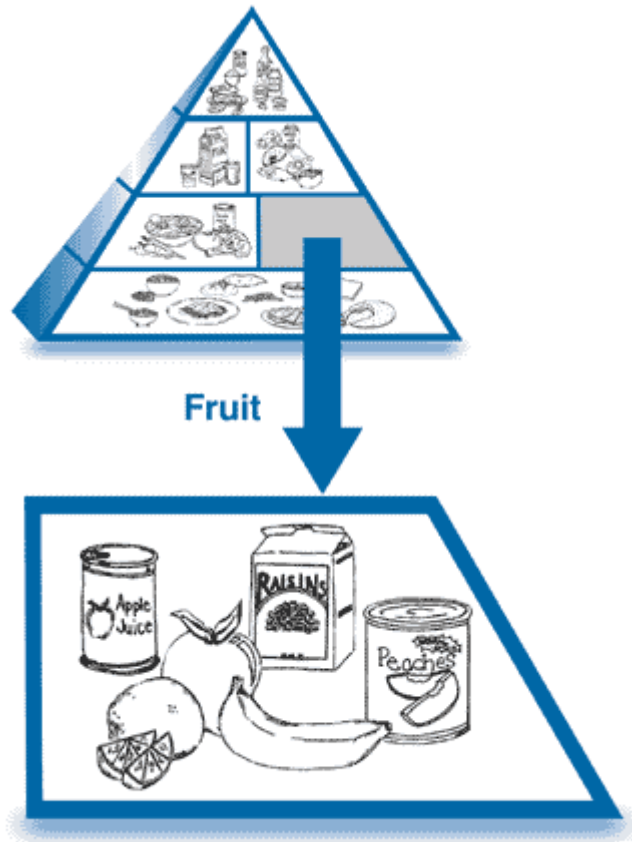
A diabetes teacher can help you with your meal plan.

What are healthy ways to eat vegetables?

- Eat raw and cooked vegetables with little or no fat, sauces, or dressings.
- Try low-fat or fat-free salad dressing on raw vegetables or salads.
- Steam vegetables using a small amount of water or low-fat broth.
- Mix in some chopped onion or garlic.
- Use a little vinegar or some lemon or lime juice.
- Add a small piece of lean ham or smoked turkey instead of fat to vegetables when cooking.
- Sprinkle with herbs and spices. These flavorings add almost no fat or calories.
- If you do use a small amount of fat, use canola oil, olive oil, or soft margarines (liquid or tub types) instead of fat from meat, butter, or shortening.

Fruit

Fruit gives you energy, vitamins, minerals, and fiber.



Examples of fruit include

- apples
- fruit juice
- strawberries
- bananas
- raisins
- oranges
- mango
- guava
- papaya

How much is a serving of fruit?

Examples of 1 serving:



1 small
apple

OR



1/2 cup
juice

OR



1/2 grapefruit

Examples of 2 servings:



1 banana

OR



1/2 cup
orange juice

+



1 1/4 cups
whole
strawberries

If you have more than one serving at a meal, you can choose different types of fruit or have two servings of one fruit.

Print out this chart. Then fill in the blanks with how many servings of fruit to have at meals and snacks.

1. How many servings of fruit do you now eat each day?

I eat _____ fruit servings each day.

2. Check how many servings of fruit to have each day in the section on How much should I eat each day.

I will eat _____ fruit servings each day.

To control your blood glucose, spread the servings you eat throughout the day.

3. I will eat this many servings of fruit at

Breakfast _____

Snack _____

Lunch _____

Snack _____

Dinner _____

Snack _____

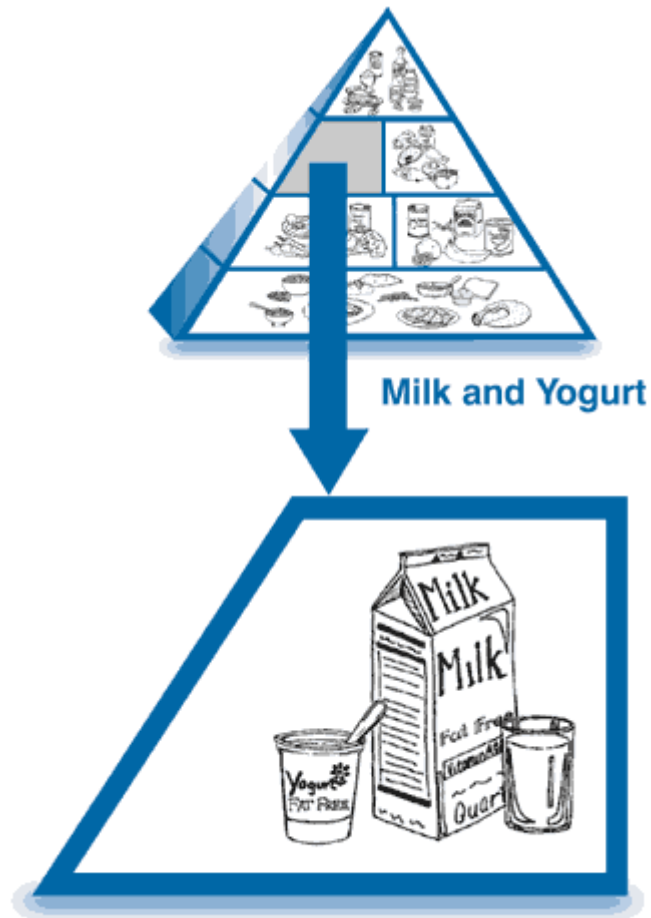
A diabetes teacher can help you with your meal plan.

What are healthy ways to eat fruit?

- Eat fruits raw or cooked, as juice with no sugar added, canned in their own juice, or dried.
- Buy smaller pieces of fruit.
- Eat pieces of fruit rather than drinking fruit juice. Pieces of fruit are more filling.
- Drink fruit juice in small amounts.
- Save high-sugar and high-fat fruit desserts such as peach cobbler or cherry pie for special occasions.

Milk and Yogurt

Milk and yogurt give you energy, protein, fat, calcium, vitamin A, and other vitamins and minerals.



How much is a serving of milk and yogurt?

Examples of 1 serving:



1 cup fat-free or low-fat yogurt

OR



1 cup skim or 1% milk

Note: If you are pregnant or breastfeeding, have four to five servings of milk and yogurt each day.

Print out this chart. Then fill in the blanks with how many servings of milk and yogurt to have at meals and snacks.

1. How many servings of milk and yogurt do you now have each day?
I have _____ milk and yogurt servings each day.

2. Check how many servings of milk and yogurt to have each day in the section on How much should I eat each day.
I will have _____ milk and yogurt servings each day.

To control your blood glucose, spread the servings you have throughout the day.

3. I will have this many servings of milk and yogurt at

Breakfast _____

Snack _____

Lunch _____

Snack _____

Dinner _____

Snack _____

A diabetes teacher can help you with your meal plan.

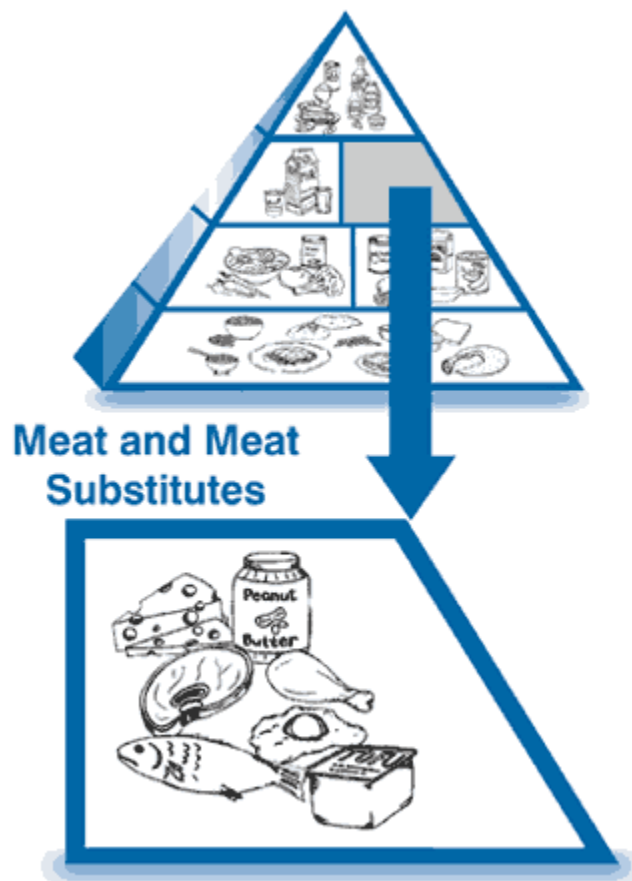
What are healthy ways to have milk and yogurt?

- Drink fat-free (skim or nonfat) or low-fat (1%) milk.
- Eat low-fat or fat-free fruit yogurt sweetened with a low-calorie sweetener.
- Use low-fat plain yogurt as a substitute for sour cream.

Meat and Meat Substitutes

The meat and meat substitutes group includes meat, poultry, eggs, cheese, fish, and tofu. Eat small amounts of some of these foods each day.

Meat and meat substitutes help your body build tissue and muscles. They also give your body energy and vitamins and minerals.



Examples of meat and meat substitutes include

- chicken
- fish
- beef
- eggs
- peanut butter
- tofu
- cheese
- ham
- pork

How much is a serving of meat or meat substitute?

Examples of 1 serving:



2 to 3 ounces of
cooked lean
meat, chicken,
or fish*

OR



1 egg

OR



4 ounces (1/2 cup)
of tofu

OR



2 tablespoons
of peanut
butter

*Two to three ounces of meat (after cooking) is about the size of a deck of cards.

Print out this chart. Then fill in the blanks with how many servings of meat and meat substitutes to have at meals and snacks.

1. How many servings of meat or meat substitutes do you now eat each day?
I eat _____ servings of meat or meat substitutes each day.

2. Check how many servings of meat or meat substitutes to have each day in the section on How much should I eat each day.

I will eat _____ servings of meat or meat substitutes each day.

To control your blood glucose, spread the servings you eat throughout the day.

3. I will eat this many servings of meat or meat substitutes at

Breakfast _____

Snack _____

Lunch _____

Snack _____

Dinner _____

Snack _____

A diabetes teacher can help you with your meal plan.

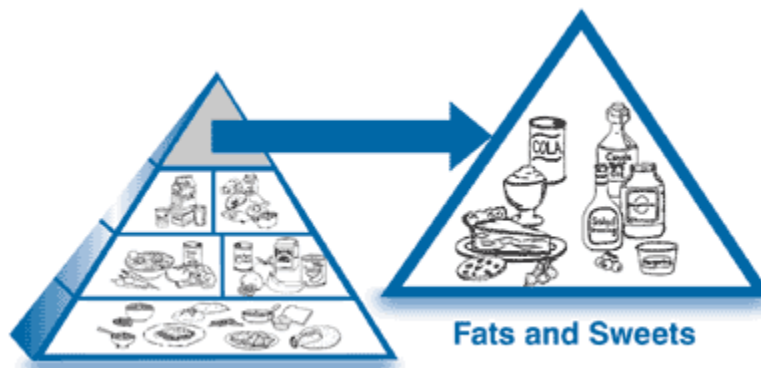
What are healthy ways to eat meat or meat substitutes?

- Buy cuts of beef, pork, ham, and lamb that have only a little fat on them. Trim off extra fat.
- Eat chicken or turkey without the skin.
- Cook meat or meat substitutes in low-fat ways:
 - broil
 - grill
 - stir-fry
 - roast
 - steam
 - stew
- To add more flavor, use vinegars, lemon juice, soy or teriyaki sauce, salsa, ketchup, barbecue sauce, and herbs and spices.
- Cook eggs with a small amount of fat or use cooking spray.

- Limit the amounts of nuts, peanut butter, and fried chicken that you eat. They are high in fat.
- Choose low-fat or fat-free cheese.

Fats and Sweets

Limit the amounts of fats and sweets you eat. They have calories, but not much nutrition. Some contain saturated fats and cholesterol that increase your risk of heart disease. Limiting these foods will help you lose weight and keep your blood glucose and blood fats under control.



Examples of fats include

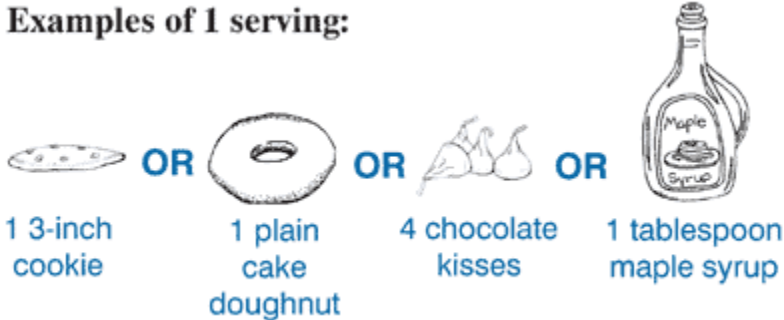
- | | | |
|------------------|-------------|-----------|
| • salad dressing | • butter | • avocado |
| • oil | • margarine | • olives |

Examples of sweets include

- | | | |
|----------------|-----------|---------|
| • regular soda | • cake | • pie |
| • ice cream | • cookies | • candy |

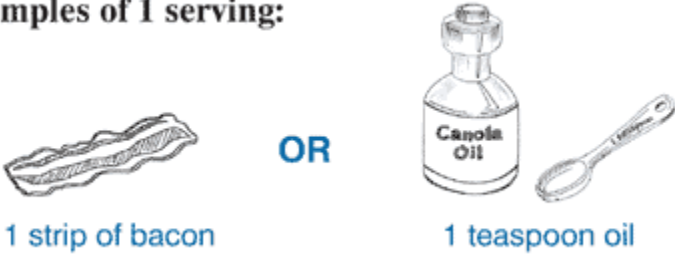
How much is a serving of sweets?

Examples of 1 serving:



How much is a serving of fat?

Examples of 1 serving:



Examples of 2 servings:



How can I satisfy my sweet tooth?

It's okay to have sweets once in a while. Try having sugar-free popsicles, diet soda, fat-free ice cream or frozen yogurt, or sugar-free hot cocoa mix.

Other tips:

- Share desserts in restaurants.
- Order small or child-size servings of ice cream or frozen yogurt.
- Divide homemade desserts into small servings and wrap each individually. Freeze extra servings.
- Don't keep dishes of candy in the house or at work.

Remember, fat-free and low-sugar foods still have calories. Talk with your diabetes teacher about how to fit sweets into your meal plan.

Alcohol

Alcohol has calories but no nutrients. If you drink alcohol on an empty stomach, it can make your blood glucose level too low. Alcohol also can raise your blood fats. If you want to drink alcohol, talk with your doctor or diabetes teacher about how it fits into your meal plan.

Your Meal Plan

Print out this chart to plan your meals and snacks for one day.

Breakfast		
Food Group	Food	How Much
Snack		
Food Group	Food	How Much
Lunch		
Food Group	Food	How Much
Snack		
Food Group	Food	How Much
Dinner		
Food Group	Food	How Much
Snack		
Food Group	Food	How Much

Measuring Your Food

To make sure your food servings are the right size, use

- measuring cups
- measuring spoons
- a food scale

Also, the Nutrition Facts label on food packages tells you how much of that food is in one serving.

Weigh or measure foods to make sure you eat the right amounts.

These tips will help you choose the right serving sizes.

- Measure a serving size of dry cereal or hot cereal, pasta, or rice and pour it into a bowl or plate. The next time you eat that food, use the same bowl or plate and fill it to the same level.
- For one serving of milk, measure 1 cup and pour it into a glass. See how high it fills the glass. Always drink milk out of that size glass.
- Meat weighs more before it's cooked. For example, 4 ounces of raw meat will weigh about 3 ounces after cooking. For meat with a bone, like a pork chop or chicken leg, cook 5 ounces raw to get 3 ounces cooked.
- One serving of meat or meat substitute is about the size and thickness of the palm of your hand or a deck of cards.
- A small fist is equal to about 1/2 cup of fruit, vegetables, or starches like rice.
- A small fist is equal to 1 small piece of fresh fruit.
- A thumb is equal to about 1 ounce of meat or cheese.
- The tip of a thumb is equal to about 1 teaspoon.

Points to Remember

- What, when, and how much you eat all affect your blood glucose level.
- You can keep your blood glucose at a healthy level if you
 - Eat about the same amount of food each day.
 - Eat at about the same times each day.
 - Take your medicines at the same times each day.
 - Exercise at the same times each day.
- Every day, choose foods from these food groups: starches, vegetables, fruit, meat and meat substitutes, and milk and yogurt. How much of each depends on how many calories you need a day.
- Limit the amounts of fats and sweets you eat each day.

Section 4

Hypoglycemic Attacks

Once in awhile you may encounter a hypoglycemic attack. The symptoms of these attacks were discussed in chapter 1. If you ever have an attack, I have found that if you have a little bit of orange juice with a few oyster crackers you will feel better within about 10-15 minutes. Having the juice and crackers helps bring your blood sugar back up to a normal level. I highly recommend that you always have a bag of oyster crackers with you at all times.

Over the years, I have found that the following cause attacks: (1) Missing a meal, (2) Eating the wrong types of food, (3) Encountering high stress levels, (4) Eating too fast and (5) Eating too much of one item instead of practicing moderation.

I will never forget one of my first major hypoglycemic attacks. I was about 20 years old and my mother and I bought some food at our local Deli. One of the items we purchased was a large piece of Italian bread. I quickly started eating this bread once we bought it and ate almost the whole thing before we arrived back home. Several minutes after eating the bread, I felt very uncomfortable and suffered briefly from a hypoglycemic attack. I quickly learned to eat in moderation and NEVER to eat a lot of anything at once by itself. I later discovered that bread is made of carbohydrates, and carbohydrates break down into sugar in our bodies. Therefore, you never want to have too much bread at once. However, you may have a small amount of bread with your well-balanced meal.

This is just one of my horror stories. I have experienced many attacks over the years. However, recently I have not experienced any serious attacks and when I do have an attack it is a minor one. When these attacks do occur, it is usually because I broke one of the five rules that were mentioned above. By obeying these rules, you can live a much better lifestyle.

Section 5

Feel Great 24-7!

In order to feel great all day, you must:

- Get enough sleep
 - Exercise daily
 - Avoid high levels of stress
 - Eat the proper foods at the right times
 - Don't do too much of one activity (practice moderation)
 - Take time to laugh and have fun
 - Visit your doctor on a regular basis
-

- 1) **Get enough sleep:** I recommend that you get approximately 8 hours of sleep every night. Your body needs sleep just like your car need gas. Have you ever tried running your car when you were low on gas? If so, you probably noticed that it did not run quite as well as it does when the tank is full. Your body is very similar. When we get a good night of sleep our body is refreshed and ready for a full day of work. This sleep also helps properly regulate your blood sugar and is one of the ingredients that we will discuss that helps you feel better during the day. By the way, I go to sleep every night by 10pm and I wake up at 6am.
- 2) **Exercise daily:** This is a very important activity and needs to be done every day. Everyday I do 60 minutes of cardiovascular activity such as tread milling, bike riding, etc. I also do weight lifting and ab crunches to keep my body in great shape. By exercising, you will be reducing your stress levels. Lowering your stress level will help you better regulate your hypoglycemia.
- 3) **Avoid high levels of stress:** Stress can cause many serious medical problems. It also can easily set off a blood

sugar problem. Therefore, I highly recommend that you moderate your day by making sure all of your activities are well balanced and not too demanding. You may want to consider delegating really high stress activities to others who can help you with them. Also, consider making a list of everything you would like to do during the day, the night before, and then when you do each activity, check it off your list. This will help you stay in control of your day and lower your stress levels.

- 4) **Eat the proper food at the right times:** This rule is also very important. You can make sure that you successfully apply this rule by following the information in this book. This information will give you the knowledge you need to customize a special diet that fits your lifestyle.
- 5) **Don't do too much of one activity during the day:** One way to avoid breaking this rule is to plan daily goals. Every night, I write down all of the things that I would like to accomplish during the following day. This allows me to create a game plan to ensure that there is moderation in my day and that stress levels are kept low due to proper planning and less surprises. I also recommend that you work to the clock. In other words, if you assign one hour of time to a certain activity, make sure that after that hour is over you move on to the next activity on your schedule for the day.
- 6) **Take time to laugh and have fun:** I set one hour aside every day just for my entertainment pleasure. It is also a great idea, if possible to take this free time in the middle of your day to help break up the stress of the day. I believe that this strategy alone, can add years onto your life. In fact, I recently read an article in a magazine that discussed laughter. The author mentioned that laughter and happiness can help you live longer by helping you maintain great health. For example, if you work a 9am to 5pm job, you may want to turn your lunch break into your personal hour that allows you to relax. It is very important that you do not allow others to bother you with work problems. Remember this is your hour and you deserve it!

7) **Visit your doctor on a regular basis:** It is a good idea to find a doctor in your area who specializes in endocrinology and metabolism and can help you successfully live with your hypoglycemia. I visit my doctor at least once a year to let him examine me and we also take time to discuss new ideas that could potentially help me to live a much better lifestyle.

Section 6

David's Normal Day

People always ask me about my lifestyle and are very curious to know what takes place during a normal day. I have decided to answer this question in this section by revealing my schedule for a normal day.

6:00AM – Alarm clock starts playing music and I wake up. By the way, I wake up to my favorite Jazz station, 98.7FM.

6:20AM – Make my breakfast

6:30AM – Eat breakfast and read Wallstreet Journal

7:15AM – Brush teeth, shave, and get dressed

7:30AM – Check email, phone messages, fax messages and do other miscellaneous things

8:00AM – Eat snack

8:15AM to 12:30PM – Business Activities, eating my appropriate meals, and go on a bike ride

12:30PM – Exercise by doing the treadmill and ab crunches

1:00PM to 2:00PM – Business Activities and eating my appropriate meal

2:00PM – Take a break and watch television

3:00PM to 7:30PM – Business Activities, weight lifting, get mail and review and eat my appropriate meals

7:30PM to 10:00PM – Read newspapers, magazines, books and other literature. I also watch some television. I make sure that I eat the appropriate meals. I set my agenda for the following day. Finally, I brush my teeth and go to bed.

Section 7

Miscellaneous

There is a lot of information that did not fit into the other sections, therefore, I decided to create a miscellaneous section for it.

Eating out can be Dangerous

Be careful when you eat out at a restaurant. Not all restaurants cater to your dietary needs. The one place that I can count on is Wendy's. When I do not feel like cooking my dinner I go to Wendy's and order a double cheeseburger with tomato, onion, lettuce and mustard. I love these burgers. I just make sure that I add some fruit to this meal and I have a great dinner that fits my dietary needs. You may want to try this, it may work for you.

Blood Glucose Meter

It is a good idea to occasionally check your blood sugar. I am fortunate that I do not have to do this very often because I regulate it so well with my diet but in the early days, I had to do it more frequently. The meter I bought was the ONE TOUCH model. This unit was fairly painless and easy to use. It also stores your blood glucose number along with the date and time it was taken. You can use this unit to draw blood either from your arm or finger tip. I checked my blood using the finger tip. Also, I have heard that if you take your blood sample from the side of your finger tip it is less painful, you may want to try this.

Medical Alert Jewelry

I highly recommend that you purchase a piece of medical alert jewelry. I have a gold necklace that mentions that I am hypoglycemic. You can also purchase a medical alert bracelet. I bought my necklace from the Bodyguard company. You can visit them online at www.medicalidtags.com.

Thermos

Occasionally you will find it necessary to take your meal with you. If you need to keep your meal hot, I have found that using a high quality Thermos works great. I currently use a super high-end stainless steel thermos that keeps my food warm and is easy to clean. I personally use a "thermal insulated stainless steel" thermos. I use the Brookstone model that can be purchased at the Brookstone store. You can visit them online at www.brookstone.com.

Drink Water

I recommend that you drink water throughout the day. Make sure that you consume water with all of your major meals and also by itself during the day.

Treats

I enjoy having some treats during the day. Here is two of the most popular things that I have. (1) Sugar Free Russell Stover Pecan Delights and (2) Whipping cream on my fruit. These two treats are very good and should not adversely affect your blood sugar assuming you do not over do your portion.

Hemoglobin Alc Test

It is also a great idea to have a hemoglobin Alc test conducted at least once a year. This test measures your average blood glucose level over the last 3 months. A score of (4-6%) is considered "normal" by the American Diabetes Association.

Exercise Book

The book that I used to implement my weight training program is entitled, "Weight Training Made Easy" by Joyce Vedral, Ph.D. This book is available at www.joycevedral.com.

Conclusion

I would like to take this opportunity to thank you for purchasing my book. By following the advice given, you should be able to improve your current lifestyle. Most of the information that was shared with you came from my life experiences. Therefore, this information is based on results and not theory. I strongly believe that together we can help each other live better lives by controlling our hypoglycemia. Please keep in touch and let me know of your future success stories using the information presented in this book!

Appendix

David's Top "4" Dinner Recipes

Cheeseburger

- Use Sirloin Ground Beef
- Cook beef patty in a non stick pan until well done
- Add your choice of American, Swiss, or Colby Jack Cheese
 - Melt cheese on top of the patty
- Hamburger Buns with 3 grams or less of sugar
 - Add 1 slice of tomato
 - 1 piece of lettuce
 - 1 thin slice of onion
 - A small amount of mustard
- Side serving of steamed vegetables such as broccoli and small dish of strawberries, blueberries or raspberries

Pork Chops

- Cook broccoli in a steamer pan separately from pork chops
 - Spray frying pan with Pam cooking spray
- Brown both sides of pork chops on high temperature
- Lower temperature to medium and add low fat chicken broth, enough to come to the top of pork chops
 - Cover pan with lid for 20-25 minutes depending on thickness of pork chops
 - Add more broth if necessary
- Remove lid and continue cooking for 5-10 minutes until done and browned
 - One piece of 100% whole wheat bread (I use the Stone Hearth brand)
- Have a small amount of fruit with meal / fruit can include strawberries, blueberries or raspberries, watermelon, cantaloupe

Chili

- Brown 1 ½ lb. ground sirloin with 1 small diced onion
- Put cooked meat and onion into medium size kettle with lid
- Add (3) 16 oz. cans of Bush's mild chili beans (the no sugar version) and ½ jar of Andiamo pasta sauce (26 oz. jar the tomato basil type / 2 grams sugar per serving)
- Mix ingredients and let it come to a boil, cover and reduce heat to medium low for approximately one hour
- Remove lid and continue cooking on low for another 10 minutes stirring occasionally
- If you prefer spicier chili you can add ½ teaspoon chili powder during the cooking time
 - Makes approximately 6-7 generous servings
 - One piece of 100% whole wheat bread (I use the Stone Hearth brand)
 - Have a small amount of fruit with meal / fruit can include strawberries, blueberries or raspberries, watermelon, cantaloupe

Stir Fry

- Make rice separately
- Dice either beef or chicken into one inch pieces
- Stir fry meat in small amount of oil, and remove from the wok, set aside
 - Wipe out wok with paper towel
 - Add small amount of oil to wok
 - Make sure the heat is on high
- Add chopped celery, red and yellow diced sweet peppers, chopped scallions and stir fry until soft but still crunchy
- Add broccoli and carrots, that have been previously steamed to soften
- Add cooked meat back to the rest of the ingredients
- Add a mixture of $\frac{3}{4}$ cup of sodium reduced chicken broth with 1 tablespoon of corn starch stirred into the chicken broth and 1 teaspoon of soy sauce
- Incorporate the liquid with the other ingredients in the wok at high temperature until liquid thickens
 - Serve over cooked rice
- Have a small amount of fruit with meal / fruit can include strawberries, blueberries or raspberries, watermelon, cantaloupe

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Order more copies of this book at:

<http://www.hypoglycemiadiet.org>

**E-mail your success stories to
David@HypoglycemiaDiet.org**