

Diabetes Resource Guide



Your Diabetes Health Ally

ARKRAY has devoted more than 60 years to creating solutions that simplify the lives of people with diabetes and their caregivers.

Our expertise and complete, personalized approach to cost-effective blood glucose testing and diabetes management is aimed at helping you better control your diabetes.

This personalized guide will give you essential information on carbohydrates, blood sugar levels, meal planning, portion sizes and basic diabetes healthcare recommendations. We want to help you live a richer, healthier life.



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Resources

Check out the websites below for more information and tools to help you manage your diabetes.

ARKRAY USA, *Your Diabetes Health Ally*

www.arkcarewellness.com

ADA (American Diabetes Association)

www.diabetes.org

CDC (Centers for Disease Control-Diabetes Division)

www.cdc.gov/diabetes

NDEP (National Diabetes Education Program)

www.ndep.nih.gov

WebMD-Diabetes Health Center

www.webmd.com/diabetes/

My important information

My name: _____

My care team

Primary care provider

Name _____ Phone _____

Endocrinologist

Name _____ Phone _____

Certified Diabetes Care and Education Specialist (CDCES)

Name _____ Phone _____

Registered Dietitian (RD)/Registered Dietitian Nutritionist (RDN)

Name _____ Phone _____

Pharmacy

Name _____ Phone _____

Emergency contact

Name _____ Phone _____

Other

Name _____ Phone _____

Name _____ Phone _____

Name _____ Phone _____

Notes _____

Diabetes basics

Living with diabetes requires special care.

This personalized guide will give you information to manage your diabetes and your day-to-day life.

The type of diabetes you have can affect your body in different ways.

It's important to know which type you have, so you and your healthcare team can choose the best treatment plan for you.

☐ I have type 1 diabetes

Your pancreas isn't able to make insulin or can only make very little insulin. Because your body needs insulin to live, you'll need to get this hormone from sources—shots or insulin pump—outside your body.

☐ I have type 2 diabetes

Your pancreas either doesn't make enough insulin or your body isn't able to use the insulin effectively. Often, you can control type 2 diabetes with healthy diet and exercise, but many times oral medications and insulin are needed.

Glucose (Blood Sugar)

- Glucose is the smallest building block that makes up carbohydrates.
- Glucose molecules need insulin to help your body's cells absorb sugar.
- With diabetes, it's important to manage the level of sugar in your blood.

Insulin

- Insulin is a hormone that is essential for your body to metabolize carbohydrates that you eat.
- Insulin helps manage the level of sugar in your blood by allowing your body's cells to absorb the sugar.

Diabetes basics

Glucagon

- Glucagon is a hormone that helps keep blood sugar from dropping too low (hypoglycemia).

Carbohydrates (Carbs)

- A carbohydrate is a nutrient made up of glucose molecules.
- Carbohydrate-rich foods include rice, pasta, bread, tortillas, beans, lentils, cereal, milk, yogurt, fruit, starchy and non-starchy vegetables, sugar, sweets and desserts.
- Eat adequate portions of carbohydrates to meet your daily needs.
- Talk with your healthcare team about your meal plan, including the amount of carbs you need.

Hemoglobin A1c (HbA1c)

- HbA1c is a test that measures the average amount of sugar attached to blood cells from the past two to three months.

Estimated Average Glucose (eAG)

- eAG is a measurement to help you understand how well your diabetes is managed.
- eAG translates your A1c into the blood sugar number you have most often.
- eAG uses the same units (mg/dL) as your blood glucose meter, so you can better understand your blood sugar numbers over time.

A1c %	eAG mg/dL
6.0	126
6.5	140
7.0	154
7.5	169
8.0	183
8.5	197
9.0	212
9.5	226
10.0	240
10.5	255

Hypoglycemia

HYPOglycemia is blood sugar less than 70 mg/dL. It is important to know the signs that your blood sugar is dropping too low so you can respond correctly and prevent any serious problems.

Signs of hypoglycemia

Shaky	Hungry	Heartburn
Weak	Confused	Nervous
Irritable	Sweaty	Headache
Nightmares	Tired	Dizzy

Depending on your history, your healthcare provider may set your low blood sugar reading higher than 70 mg/dL.

Blood sugar that is too low for me: _____ mg/dL.

Some causes of hypoglycemia:

- Missing a meal
- Not eating sufficient carbohydrates
- Type of meal – high fat meals will delay carbohydrate absorption
- Fasting
- Too much insulin
- Timing of insulin action
- Sulfonylureas increase insulin over several hours
- Meglitinides increase short-term insulin
- Intensity and duration of exercise
- Gastroparesis
- Drinking too much alcohol without food

If you notice signs of hypoglycemia, check your blood sugar with your GLUCOCARD® Blood Glucose Meter.

If your blood sugar reading is below 70 mg/dL or the level set by your healthcare provider, proceed to **The Rule of 15**.

Hypoglycemia

Remember

- Call your doctor if you experience hypoglycemia several times in one week.
- Always carry food and wear medical identification for emergencies.
- If you take insulin, keep a glucagon kit at home.

When you are sick, be sure to check your blood sugar level frequently and take your diabetes medication. Ask your doctor or diabetes care and education specialist for a sick-day plan to manage your diabetes.

The Rule of 15

If your blood sugar reading is below 70 mg/dL,
or the level set by your healthcare provider

1. Eat 15 grams (g) of carbs
2. Wait 15 minutes
3. Check blood sugar


If your blood sugar reading is still below 70 mg/dL
or the level set by your healthcare provider

1. Eat another 15 g of carbs
2. Wait 15 minutes
3. Check blood sugar

Call your doctor if your blood sugar is still low after doing the **Rule of 15** _____ times.

Hypoglycemia

Each of the following equals 15 g of carbohydrates

3 or 4 glucose tablets 15 g of glucose gel		5 or 6 pieces of hard candy (not sugar free)	
½ cup (4 oz) any fruit juice		1 Tbsp of honey	
4 tsp of sugar		½ cup (4 oz) of a regular—not diet—soft drink	

Hyperglycemia

HYPERglycemia occurs when blood sugar levels are excessively high.

Fasting hyperglycemia occurs when your blood sugar reading is above your goal level after not eating for at least 8 hours.

Post-meal hyperglycemia occurs when your blood sugar reading is above your goal level 1 to 2 hours after eating.

Signs of hyperglycemia

Stomach ache
Blurred vision

Dry mouth
Extreme thirst

Leg cramps
Frequent urination

Some causes of hyperglycemia

- Not enough insulin in your body
- Not enough exercise
- Eating too much
- Fatigue
- Not taking your diabetes medications
- Infection, illness or stress

Hyperglycemia

Ways to bring your blood sugar down

Exercise		Drink water	
Inject insulin (if prescribed)		Take your medication	
Follow your meal plan exactly		Breathe deeply to lower your stress level	

My target blood glucose levels

Before meals _____ mg/dL to _____ mg/dL

1 to 2 hours after the beginning of a meal <(less than) _____ mg/dL

Before going to sleep _____ mg/dL

Goal hemoglobin A1c (HbA1c) _____

Check blood sugar _____ times a day at: (check all that apply)

☐ Wake up

☐ Breakfast

☐ Lunch

☐ Afternoon

☐ Dinner

☐ Bedtime

☐ 2 hours after breakfast

☐ 2 hours after lunch

☐ 2 hours after dinner

Other _____

My meal plan

How many carbs do I need?

Ask your healthcare provider, registered dietitian (RD) or certified diabetes care and education specialist (CDCES) how many carbs you should have with each meal and snacks.

Breakfast _____

Lunch _____

Dinner _____

Snacks _____

Here are some general recommendations.

Women

Maintain My Weight

3 to 4 carb choices (45 to 60 g of carbs) per meal

Lose Weight

2 to 3 carb choices (30 to 45 g carbs) per meal

Snacks (optional)

1 to 2 carb choices (15 to 30 g of carbs)

Men

Maintain My Weight

4 to 5 carb choices (60 to 75 g of carbs) per meal

Lose Weight

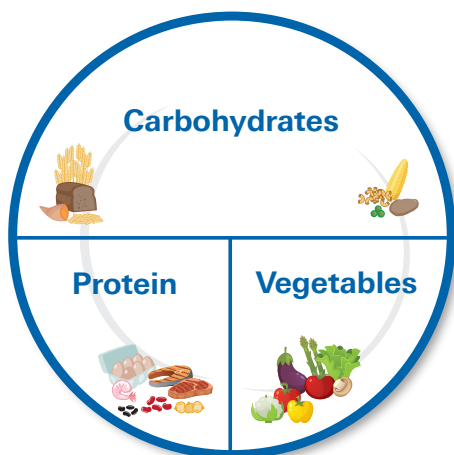
3 to 4 carb choices (45 to 60 g carbs) per meal

Snacks (optional)

1 to 2 carb choices (15 to 30 g of carbs)

My Smart Plate

Using a 9-inch dinner plate, fill your plate with more non-starchy veggies and smaller portions of starchy foods and protein—no special tools or counting required!



ARKRAY Wellness Smart Plate
Not to actual size.

Non-starchy vegetables

Fill $\frac{1}{2}$ of your plate with non-starchy vegetables

Eat 4 or more each day

25 calories and 5 g of carbs = 1 cup raw or $\frac{1}{2}$ cup cooked

Asparagus
Baby carrots
Bell peppers
Broccoli florets
Brussel sprouts
Cauliflower
Eggplant
Green beans



Jicama slices
Mushrooms
Romaine lettuce
Spinach
Snow peas
Squash
Tomatoes
Zucchini

Preparation

- Microwave, grill or stir-fry fresh or frozen veggies
- Add veggies to other foods like soups, salads, casseroles and pizza
- Store pre-cut veggies in a clear veggie bowl at the front of the fridge
- Enjoy two brightly colored veggies at lunch and dinner

My Smart Plate

Fill $\frac{1}{4}$ of your plate with lean protein.

Eat about 3 ounces at meals (size of a deck of cards)* Talk with your registered dietitian to learn how many servings of protein you should have each day

Lean protein

Halibut, cod, tilapia
Salmon, tuna steak
Canned tuna (in water)
Shrimp, scallops
95% lean ground beef
Extra-lean ground turkey
Pork tenderloin
Skinless, boneless chicken breast



Vegetarian protein

Check labels for calories and carbs

$\frac{1}{2}$ cup beans, peas, lentils
(15 g of carbs and 1 lean protein)

$\frac{1}{4}$ cup cottage cheese
(1 lean protein)

1 egg (1 medium fat protein)

1 oz part-skim mozzarella cheese
(1 lean protein)

3 oz veggie burger, soy-based (8 g carbs and 2 lean proteins)

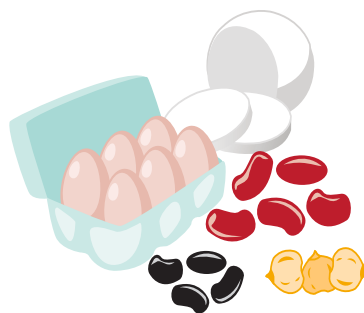
$\frac{1}{2}$ cup Edamame shelled (8 g of carbs and 1 lean protein)

$\frac{1}{4}$ cup (1 $\frac{1}{2}$ oz) tempeh plain unflavored (1 medium-fat protein)

$\frac{1}{2}$ cup (4 oz) tofu (1 medium fat protein)

1 lean protein = 7 g of protein, 45 calories and 0 g of carbs

1 medium protein = 7 g of protein and 75 calories



Preparation

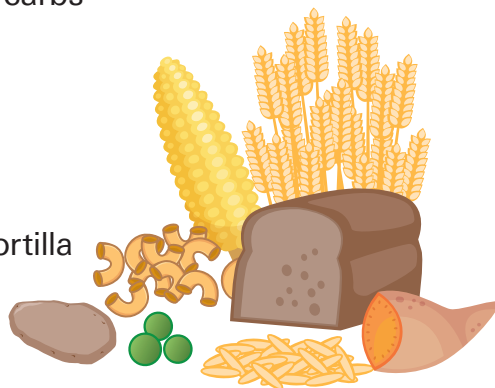
- Eat fish twice a week: salmon, trout and halibut for healthy Omega 3s
- Enjoy a meatless meal with black bean tacos
- Stir-fried tofu or veggie burgers
- Buy red meat labeled round, sirloin or tenderloin
- Spice up skinless chicken with a Cajun rub

My Smart Plate

Fiber-rich grains and starchy foods

Fill $\frac{1}{4}$ of your plate with fiber-rich carbs
80–100 calories and 15 g of carbs

- 1 slice whole-grain bread
- $\frac{1}{3}$ cup quinoa, brown rice
- $\frac{1}{2}$ cup bran flakes
- $\frac{1}{3}$ cup whole-wheat pasta
- 6" whole-wheat tortilla or corn tortilla
- 1 oz mini whole-grain bagel
- $\frac{1}{2}$ cup oatmeal
- $\frac{1}{2}$ cup (3 $\frac{1}{2}$ oz) sweet potato
- $\frac{1}{2}$ cup peas, corn
- 1 4-inch square or 4 inches across waffle
- $\frac{1}{2}$ cup beans, lentils
- 3 Ry Krisp® crackers



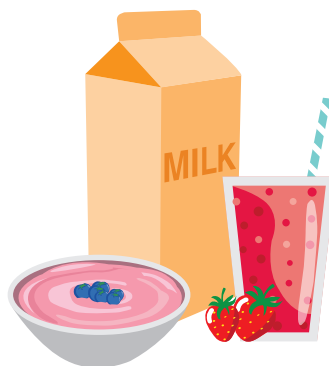
Preparation

- Try whole grains like quinoa (keen-wah) or barley
- Buy breads with 3 or more g of fiber
- Mix whole-wheat pasta with regular pasta
- Choose brown rice over white and fried rice
- Watch your portion size carefully

Low-fat dairy

Recommend 3 cups each day
100 calories, 12 g of carbs, 8 g
of protein unless noted otherwise

- 1 cup (8 fl oz) fat-free milk
- $\frac{2}{3}$ cup (6 oz) plain low-fat yogurt (Dannon/FAGE)
- $\frac{2}{3}$ cup (6 oz) low-fat yogurt with fruit (add additional 15 g of carbohydrate)
- 1 cup (8 fl oz) unsweetened almond milk (0 g carbs, 0 g protein, 5 g fat, 45 calories)
- 1 cup (8 fl oz) plain almond milk (7 g carbs, 0 g protein, and 55 calories)
- 1 cup (8 fl oz) regular plain soy milk (15 g carb, 0 g protein, and 115 calories)



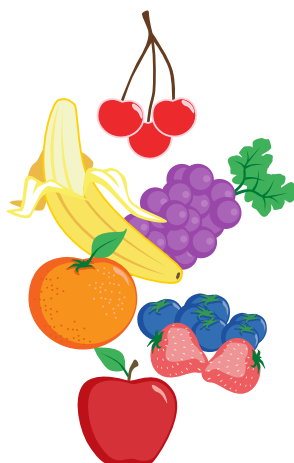
My Smart Plate

Wholesome fruit

60 calories and 15 g of carbs

Eat 2 servings of fruit each day. Talk with your registered dietitian to learn how many servings of fruit you should have each day.

- Small apple
- Small orange
- Small pear
- $\frac{3}{4}$ cup berries
- 1 cup cantaloupe
- $\frac{1}{2}$ grapefruit
- 1 $\frac{1}{4}$ cup whole strawberries
- $\frac{1}{2}$ cup light canned fruit or packed in its own juice
- 17 small grapes
- 1 kiwi
- $\frac{1}{2}$ cup mango slices
- $\frac{3}{4}$ cup frozen peaches
- $\frac{3}{4}$ cup pineapple
- 12 cherries



Healthy fats

45 calories and 0 g of carbs.

Eat these with colorful fruits and veggies.

- 1 tsp olive or canola oil
- 2 Tbsp avocado
- 8 large black olives
- 7 almonds or cashews
- 2 Tbsp ground flaxseed
- 2 Tbsp light salad dressing
- $\frac{1}{2}$ Tbsp peanut butter





Portion size

Check food labels, online and in your journal for a listing of carbs and calories in foods.

Use these common objects to help size up healthy servings.

	Size of...	
1 cup	A baseball	
1 fluid cup	A small coffee cup	
½ cup	A light bulb	
¼ cup	An egg	
1 Tbsp	Your thumb	
2 Tbsp	A golf ball	
1 tsp	A penny	
1 oz	4 dice	
3 oz	Deck of cards	
4 oz	A checkbook	

Food	Size of...	Carbs	Calories
Medium sweet potato	 Computer mouse	25 g	105
Medium fruit	 Baseball	15-20 g	60-80
Whole-grain roll	 Computer mouse	15-20 g	80
4-inch waffle	 DVD	15 g	80-100
1 oz turkey or ham lunchmeat	 DVD	1 g	20-40
Small brownie	 Sticky note	15 g	100
Slice of cake	 Deck of cards	30 g	100-150
10 gummy bears	 Gummy bear	20 g	80

Nutrition facts

Checking food labels can help you eat healthy and count carbs.

For serving size, carb and calorie content, check:

- Food labels
- Online resources
- The listing at the back of this booklet

Serving Size and Total Carbohydrate show you how many carbs are in one serving.

When comparing cereals, as both these are oatmeal options, it is important to pay close attention to the servings. One is plain oatmeal and the other is instant oatmeal with blueberries and cream. The plain oatmeal is 40 g and the flavored one is 30 g. Although both of them are made with whole grains, one has added sugars and slightly more carbohydrates. The plain oatmeal will provide you additional calories as you are getting a larger serving of food.



Nutrition Facts	
About 13 servings per container	
Serving Size	1/2 Cup Dry (40 g)
Amount Per Serving	Calories 150
% Daily Value*	
Total Fat 3g	4%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Polyunsaturated Fat 1g	
Monounsaturated Fat 1g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 27g	10%
Dietary Fiber 4g	13%
Soluble Fiber 2g	
Total Sugars 1g	
includes 0g Added Sugars	0%
Protein 5g	
Vitamin D 0mcg	0%
Calcium 20mg	0%
Iron 1.5mg	8%
Potassium 150mg	15%
Thiamine 0.2mg	10%
Phosphorus 130mg	10%
Magnesium 40mg	10%

Ingredients: [Whole grain rolled oats.](#)

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Nutrition Facts	
8 servings per container	
Serving Size	1 Packet (30g)
Amount Per Serving	Calories 110
% Daily Value*	
Total Fat 1.5g	4%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Polyunsaturated Fat 0.5g	
Monounsaturated Fat 0.5g	
Cholesterol 0mg	0%
Sodium 140mg	6%
Total Carbohydrate 22g	8%
Dietary Fiber 2g	8%
Soluble Fiber <1g	
Total Sugars 8g	
Includes 7g Added Sugars	13%
Protein 5g	
Vitamin D 0mcg	0%
Calcium 10mg	0%
Iron 0.7mg	2%
Potassium 80mg	0%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Ingredients: [Whole grain rolled oats, sugar, dried blueberries, salt, dried cream, nonfat dry milk, natural flavor, tocopherols \(to preserve freshness\).](#)

CONTAINS MILK INGREDIENTS.

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Calorie and carbohydrate counter

Below is a listing of the approximate calorie count and carbs in some foods. Foods may vary by type, brand, cooking method, etc. For more information on calories and carbs, go to www.calorieking.com.

15 g of carbs = 1 carb serving

Low-carb veggies

½ cup cooked or 1 cup fresh = 23 calories, 5 g of carbs, and 2 g of protein

Asparagus	Mushrooms	Spaghetti squash
Baby carrots	Onions	Spinach (2 cups)
Bell peppers	Pea pods	Tomatoes
Broccoli	Romaine lettuce	Zucchini
Jicama (½ cup)	(2 cups)	

Starchy veggies	Calories	Carbs
½ cup peas*	60	15
1 small corn-on-the-cob	60	15
1 cup winter squash*	80	20
Small baked potato (w/skin)*	130	30
½ cup mashed potatoes	120	15

Beans	Calories	Carbs
½ cup kidney beans*	110	20
⅓ cup baked beans*	90	19
½ cup cooked lentils*	110	18

Protein	Calories	Carbs
2 oz of skinless chicken breast	90	0
½ cup low-fat tuna salad	160	8
4 oz grilled salmon	190	0
3 oz 90% lean hamburger	200	0
1 large egg	75	0
½ cup 2% cottage cheese	100	5
3 oz baked pork tenderloin	140	0

Calorie and carbohydrate counter

Grains	Calories	Carbs
15 Kashi® snack crackers	120	19
Plain bakery bagel	300	60
Mini whole-wheat bagel	120	25
1 slice of whole-wheat bread	80	25
1 oz Chapati	80	15
1 hot dog bun (1.5 oz)	120	22
½ cup cooked oatmeal	85	15
¾ cup Cheerios®*	75	15
¾ cup bran flakes*	100	24
¾ cup frosted flakes	110	26
1 frozen waffle	95	15
Whole-wheat English muffin*	140	25
6" flour or corn tortilla	100	16
⅓ cup cooked pasta	80	15
⅓ cup cooked brown or white rice	75	15
½ cup low-fat granola*	190	40

Fruit	Calories	Carbs
¾ cup blueberries*	60	15
Small apple (4oz)	60	15
1 cup orange juice (8 oz)	110	26
1 cup cantaloupe	60	15
17 small grapes	60	16
12 cherries	60	15
½ cup kiwis sliced*	60	15
½ small mango*	60	15

*Food has 3 or more g of fiber per serving.

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Calorie and carbohydrate counter

Milk and Yogurt	Calories	Carbs
1 cup skim or 1% milk (8 oz)	100	12
1 cup plain soymilk (8 oz)	90	8
6 oz plain, non-fat yogurt	90	16
6 oz low-fat yogurt with fruit and sweetner	170	33
Small fruit smoothie	250	60

Fats and Flavorings	Calories	Carbs
1 tsp olive oil	45	0
2 Tbsp ranch dressing	129	2
2 Tbsp fat-free dressing	34	7
2 Tbsp sour cream	45	1
2 Tbsp ketchup	30	8
1 Tbsp minced garlic	15	3

Fast Food and Treats	Calories	Carbs
Small fries (3 ½ oz)	230	37
Fried fish sandwich	390	39
½ cup vanilla ice cream	230	25
Bakery cookie	350	50
1 slice thick-crust pizza	280	25
12 oz can of soda	140	40
4 Hershey's Kisses®	90	12
Egg roll	180	18
Medium mocha	300	45

Your GLUCOCARD® meter is an important tool to help you manage your diabetes and stay healthy. Use this pamphlet as a guide to learn what your blood sugar levels mean for you and for your health.

Contact ARKRAY at 800.566.8558
with questions about your blood glucose meter.

▲ Call 911 in emergencies.

The information provided in this pamphlet should be personalized to your specific diabetes treatment plan. This pamphlet is meant to assist you in understanding your treatment plan, but it should not replace instructions you receive from your healthcare team.



arkray USA, inc.