



Children's Hospital of Wisconsin Diabetes Clinic

Patient Family Education

Moving On. . .



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Introduction

You're now at an age where you will soon be able to live on your own. You may go away to college or live in your own apartment. The Children's Hospital of Wisconsin Diabetes Program wants to make sure you have the information you need to live on your own, stay safe, and manage diabetes well as an adult. This guide includes tips and advice to do that.

You do not need to read this guide from cover to cover. Instead, look at the Table of Contents page and see what topics would be helpful in your everyday life. As you face new situations, use this as your reference for helpful suggestions and tips.

Congratulations on entering the next great stage of your life!



Basic survival information

Supplies you need for living on your own

- Insulin.
- Syringes and pen needles.
- Testing supplies: Meter, strips, poker, lancets.
- Ketone testing strips that have not expired.
- Glucose tablets. Keep these in several places, such as your backpack, purse, jacket, locker, car, and dorm room.
- Emergency contact information in your wallet.
- Emergency card and phone list posted in an easy-to-find spot in your home.
- Medical alert ID.
- Insurance card.
- Fast acting carbs to treat low blood sugar: Juice, regular soda, glucose tabs, or crackers. Store this food in a safe place and tell your roommates and/friends that this is an emergency supply.
- Refrigerator to keep insulin fresh and to store your emergency supply of low blood sugar food.
- Other health supplies: Thermometer, Tylenol®/ibuprofen (Advil®, Motrin®), bandages, first aid cream, and cough drops or cough syrup.



Take more supplies than you think you'll need so you don't run out.

Extra supplies if you have a pump

- Batteries, reservoirs, infusion sets, and dressings.
- Plan ahead when it comes to your pump supplies.
- If you are going somewhere you can't easily service your pump (such as camping, boating, or hiking), take insulin and syringes with you.

Who needs to know about your diabetes care

To live safely on your own, you shouldn't keep your diabetes a secret. These people should know about your diabetes care:

- Roommates.
- Resident assistants.
- Friends you will spend a lot of time with.
- Coaches and teammates.
- Professors, if you feel it's necessary.
- School's health center.
- Co-workers/Supervisors.



To be able to help you, here's what these people need to know:

- What diabetes is.
- How to treat hypoglycemia.
- What supplies you need and where they are kept.
- In addition, your school's health center needs to know your past history and your current diabetes care plan.

Health information to keep track of

- Does your pharmacy or HMO ship supplies?
- Are you going out of state? What prescriptions will you need?
- Where can you go for supplies after hours?
- Schedule early for routine checkups with your diabetes specialist. Plan your clinic visits around school breaks.
- Be sure to get a flu shot every fall. Ask about meningitis, hepatitis, and HPV vaccinations.
- Copies of your medical records.



Make an appointment with an adult diabetes provider and get a full prescription before you leave the CHW diabetes program.

Important safety tips

- Check blood sugar levels often when you're studying for exams or working on long projects.
- Never give a shot or bolus and then get into the shower, bathtub, or hot tub. The increased circulation to the skin may cause the insulin to be absorbed rapidly. This may result in a severe low blood sugar.
- Never drink alcohol on an empty stomach. If you choose to drink alcohol, eat something substantial first. High blood sugars (first) are often followed by low blood sugars (later). Beware of mixed drinks and punch. Drink lots of water to avoid dehydration. Set your alarm for 2:00 a.m. to test your blood sugar if you've been drinking. Then reset your alarm for your usual wake-up time to retest your blood, take insulin, and eat breakfast. Go back to bed if you are not feeling well or are still tired.
- **Wear a medical alert ID at ALL times.** This is especially important if you're in a new city or away from your family. Having a low blood sugar can be mistaken for being drunk or on drugs. Especially if you're young, people might call the police rather than treat you.
- If there is going to be a time zone change of more than one hour, talk to your provider about how to adapt your schedule.
- Find out about medical waste disposal in your new city. Take a sharps container or a hard plastic bottle such as an empty laundry soap bottle to store used syringes and lancets. Make sure you label this bottle to prevent injuries.



Driving

High or low blood sugar reactions can impair your driving. Many of the signs of impairment are like those for hypoglycemia or hyperglycemia. If you have any of these signs, **do not drive**:

- Confusion
- Disorientation
- Memory loss
- Impaired judgment
- Extreme exhaustion
- Severe shortness of breath
- Chronic drowsiness
- Trouble making decisions
- Slowed reaction time
- Trouble concentrating
- Impulsive behavior
- Impaired or altered consciousness

Could I lose my license?

If your diabetes is not well controlled and your health care provider feels you are a danger behind the wheel, you may be reported to the Department of Transportation (DOT). They will restrict your driving abilities.

Restrictions may include:

- Daylight driving only.
- Limited area of driving.
- No freeway or interstate driving.
- More required driving tests, vision tests, road tests, knowledge tests, or a combination of these.



If you pass out and have an accident, you will lose your driving privileges. You may then need to provide proof that you can manage your blood sugar. You will also need verification from an MD/NP before you can drive again. The forms are available from the DOT.

Tips to take on the road

- Check your blood sugars before you start the car.
- Pull over and turn off the car if you feel low. Do not drive again until your blood sugar is back up.
- When you drive long distances, stop every two hours to check your blood sugars.
- Take a supply of fast acting sugar, snacks, and water with you in the car.
- Wear a medical alert ID at all times.
- Don't leave strips or meters in the car. Extremes of temperature can damage them.
- Take a cell phone for emergencies if you're driving alone.

Nutrition 101

The basics

You need to know:

HOW MUCH you are eating.

- Try to stick to the amount of carbs you usually eat at meals.

WHAT CARBS you are eating.

- Choose whole grains.
- Add fruits and vegetables to balance out each meal.
- Include low-fat milk or dairy for calcium.
- Indulge in a **weekly** treat—not a **daily** one.

WHAT FATS you are eating.

- Try to limit saturated fats, trans fats, or hydrogenated fats, such as desserts, cheese, bacon, and chips.
- Choose foods high in monounsaturated fats, such as nuts and nut butters. Include a lean protein source or plant-based protein food in your meals.

HOW MUCH FIBER you are eating.

- Fiber is found in whole grains, fruits, and vegetables. It provides no calories and helps lower blood glucose levels. The goal is to consume 25–35 grams of fiber per day.
 - Aim for 3–5 servings of fruits per day (1 serving = 1 whole fruit or 1 cup).
 - Aim for 3–5 servings of vegetables per day (1 serving = ½ cup cooked, 1 cup raw, or 1½ cups salad).
 - Choose whole grains and cereals with at least 3 grams of dietary fiber per serving.
 - Include dried beans or peas as much as you can.

Eating on the run

If you have a crazy schedule, be prepared. Have healthy snacks with you to prevent eating from vending machines. Try nuts, trail mixes, high fiber granola bars, or fresh fruit.

If you're at a fast food restaurant, try to:

- Eat the sandwich, but skip the sides (fries, chips, etc.).
- Order the smallest size offered.
- Order plain. Cheese, condiments, and sauces add extra calories and carbs.
- Get a non-carb drink or low-fat milk.



Choosing from unlimited food options

Whether it's a college cafeteria, a roommate or spouse who cooks, a work lunchroom, or a job that requires dining out frequently, you're going to have more choices about food as you get older. This newfound freedom and access to food make it easy to choose unhealthy foods or overeat. Remember these tips to keep your eating healthy:

- Look at all that's available before putting food on your plate.
- Take small portions of the food items you wish to eat.
- Start with a broth-based soup or plain garden salad to satisfy your hunger without many calories.
- Balance your food choices. Include healthy carbs (such as whole grains, fruits, low-fat dairy, and vegetables), protein, and a small amount of added fats.
- Don't overindulge just because food is there.

Why eat breakfast?

When you eat breakfast, it:

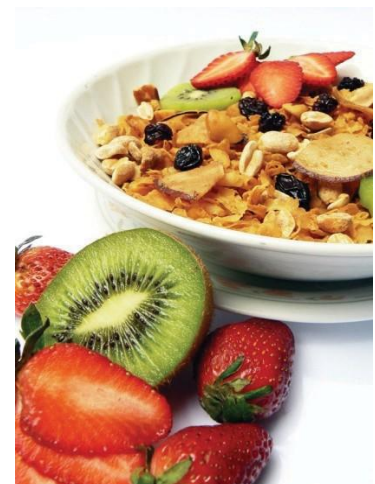
- Refuels your body after a long overnight fast.
- Improves your metabolism.
- Kick starts your brain for school or work.
- Improves your mood.



What makes a balanced breakfast?

In a perfect world, breakfast would always include foods from at least three different food groups, such as fruit, a whole grain, and a low-fat dairy food or drink. If you don't have time for that, **at least check your blood sugar, take your insulin dose, and eat one food item with carb.** Here are some one-minute breakfast ideas:

- High-fiber cereal topped with banana slices and yogurt.
- Low-fat bran muffin and yogurt topped with fruit.
- Peanut butter on wheat toast with nonfat milk.
- Instant oatmeal topped with raisins.
- Small low-fat muffin, banana, and 1 hard-cooked egg.
- Low-fat yogurt smoothie: 1 cup yogurt, ½ cup skim milk, 1 banana, and berries blended together.
- Two whole grain waffles topped with blueberries and 1 cup skim milk.
- Lean ham on an English muffin with a piece of fruit.



Vitamins and minerals

It can be hard to meet all your nutrition needs with the foods you eat. This is especially true if you are a picky eater, are on a limited food budget, or do not prepare your own meals. In these cases, you would probably benefit from a multivitamin. Some people have specific nutrient needs:

- Vegetarians may need to supplement iron, vitamin B12, and protein.
- If you are not exposed to a lot of sunlight, you may need vitamin D.
- Vitamin C can build up your immune system, which may help keep you from getting sick.
- All young adults need 3–4 servings of dairy or high calcium foods a day; bones continue to strengthen into your mid 20s.
- Women of child-bearing age should get 400 mg of folic acid daily.

What to look for when choosing a supplement?

- 100% of the dietary reference intake (DRI) for the nutrient you are looking for.
- Choose a brand that has a vitamin and mineral combination.
- Remember to take vitamins with meals; food first, then vitamin. Calcium supplements are absorbed better if taken separately from meals.



Managing your weight in adulthood

By the time you finish high school, you should be mostly done growing taller. Once you reach your full height, your carb and calorie needs go down. Many young adults gain weight quickly after high school. Some things that can cause this include:

- Lack of a consistent schedule.
- Excessive alcohol intake.
- Longer days (which mean you spend more time awake to eat).
- Slowing metabolism as you get older.
- Lower activity levels (no longer participating in team sports through school).
- Eating “convenience” foods.
- Preparing food on your own.

Secrets to preventing weight gain or promoting weight loss

1. Make a habit of healthy eating

- Make meals a priority. Snack only if needed.
- Choose foods high in fiber and low in fat most of the time.
- Avoid grazing and extended snacking.
- Stick to water and other low carb, low calorie drinks to quench your thirst.

2. Be consistent and dedicated to an exercise routine

- Make exercise a high priority. Schedule it into your day.
- Aim for 30 to 60 minutes of exercise 5 to 7 times per week.
- Choose exercises you enjoy.
- Vary your activities so you don't get bored.

3. Identify “negative” eating habits and replace them with healthier coping

- Avoid stress eating, boredom eating or emotional eating. Find fun activities to keep you busy instead.
- Listen to your stomach and your appetite.
- Eat slowly and attentively. Turn off the TV and push away books.
- Try to eat meals at the table.
- Don't just eat things because they are there.
- Plan menus that are satisfying to you.
- Drink water between meals.

4. Establish a support system

- Share your nutrition and fitness goals with a friend or family member who supports your efforts.
- Be accountable; track your exercise habits on a calendar or keep a food journal.
- Find an exercise buddy who will encourage you to exercise.



How do I know if I'm at a healthy weight?

One way to figure out your weight status is to look at your body mass index (BMI). BMI is a number that looks at both your height and your weight. This number can help you determine if your weight is healthy, too high, or too low for someone your height. Use the chart below to determine your BMI:

BMI (kg/m ²)	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Height (in.)	Weight (lb.)													
58	91	96	100	105	110	115	119	124	129	134	138	143	167	191
59	94	99	104	109	114	119	124	128	133	138	143	148	173	198
60	97	102	107	112	118	123	128	133	138	143	148	153	179	204
61	100	106	111	116	122	127	132	137	143	148	153	158	185	211
62	104	109	115	120	126	131	136	142	147	153	158	164	191	218
63	107	113	118	124	130	135	141	146	152	158	163	169	197	225
64	110	116	122	128	134	140	145	151	157	163	169	174	204	232
65	114	120	126	132	138	144	150	156	162	168	174	180	210	240
66	118	124	130	136	142	148	155	161	167	173	179	186	216	247
67	121	127	134	140	146	153	159	166	172	178	185	191	223	255
68	125	131	138	144	151	158	164	171	177	184	190	197	230	262
69	128	135	142	149	155	162	169	176	182	189	196	203	236	270
70	132	139	146	153	160	167	174	181	188	195	202	207	243	278
71	136	143	150	157	165	172	179	186	193	200	208	215	250	286
72	140	147	154	162	169	177	184	191	199	206	213	221	258	294
73	144	151	159	166	174	182	189	197	204	212	219	227	265	302
74	148	155	163	171	179	186	194	202	210	218	225	233	272	311
75	152	160	168	176	184	192	200	208	216	224	232	240	279	319
76	156	164	172	180	189	197	205	213	221	230	238	246	287	328

BMI indicators for people over 18 years old:**

- < 18.5 = Underweight
- 18.5–24.9 = Healthy weight
- 25–29.9 = Overweight
- 30–34.9 = Obesity
- 35–39.9 = Morbid obesity
- > 40 = Extreme obesity

**These indicators do not take into account fat vs. muscle mass and may be inaccurate for some athletes.

Exercise and physical activity

Exercise is an important part of adult life. It will help you to achieve long-term diabetes control and maintain a healthy adult weight. Exercise can also help you think more clearly and keep a positive outlook on life.

Exercise and diabetes

- Exercise usually lowers your blood sugar, unless your blood sugar is already high.
 - Know what your blood sugar is **before** being active.
 - When starting a new activity, check your blood sugar every hour to see how your body reacts to that activity.
- Adrenaline can make your blood sugar go higher.
 - High blood sugars from adrenaline are short-lived and will correct without insulin.
 - Know your blood sugar patterns when active. If your blood sugar remains high longer than usual, you may need a correction dose and extra blood sugar checks for a couple hours.

For planned exercise

- Reduce the amount of insulin given for carb coverage before you exercise.
- If your blood sugar is high before the start of exercise, give a correction dose. Use a higher target number to correct to so you don't go low during the activity.

For unplanned activity

- You may need to eat or drink a small amount of carb during your exercise to prevent low blood sugar.
- Always check your blood sugar after your activity to be sure your blood sugar is in your target range. You may need to eat or drink a small amount of carb/protein to prevent low blood sugar after the activity.

Exercise recommendations for healthy adults

- All healthy adults should do 30 to 60 minutes of moderate-intensity physical activity 5 to 7 days per week. Activities include:
 - Brisk walking
 - Cycling (< 10 mph)
 - Recreational sports
 - Mowing, raking, or gardening
 - Dancing
 - Golf (no cart)
 - Swimming
 - Canoeing
- This amounts to about 150 calories burned per day or 1000 calories burned per week.

Sick day guidelines

What do I eat or drink?

If you have. . .

Vomiting or nausea

Vomiting that has stopped

Sore throat

Then eat or drink. . .

Clear liquids only.

Start with “bland” foods (see description below). Follow the approximate number of carbs in your typical meal plan.

Cool, smooth foods. You may eat higher carb foods to follow meal plan with less effort.

How much fluid should I have?

To prevent dehydration, drink at least 64 ounces each day (4 ounces per hour for 16 hours).

Should the fluid have sugar or not?

This depends on your blood sugar, which you should check every 1 to 2 hours. Follow your sick day chart to see if fluids should contain sugar.

What is a clear liquid?

- Clear soda (no colas or sodas with caffeine)
- JELL-O®
- Kool-Aid® or punch
- Popsicle®
- Gatorade® or other sports drinks
- Juice (no pulp or citrus)
- Water or ice chips

What is a bland food?

Bland foods are low in fat, low in fiber, and not spicy.

- White rice, rice cereal, pasta, and mashed potatoes.
- White bread, toast, plain bagel, or muffin.
- Saltine crackers.
- Canned fruits.
- Milk, yogurt, and ice cream.*

* Add these once you can eat other bland foods. Avoid dairy if it gives you diarrhea or an upset stomach.



Foods to soothe a sore throat

- Cool or slightly warm foods that are smooth
- Foods in liquids may be better tolerated; such as crackers in soup or cereal softened in milk
- Carnation® Breakfast Essentials™ (regular or sugar-free)
- Milkshakes or malted milk
- Chocolate milk
- Ice cream, sherbet, or custard
- Regular or frozen yogurt
- Pudding
- JELL-O
- Cooked cereals
- Canned fruit
- Noodles or rice with butter
- Soups
- Mashed potatoes with butter

Carbohydrates in common sick day foods

Food	Amount	Carb Servings
Clear soda	6 oz	18 grams
Juice	4 oz	15 grams
JELL-O	½ cup	18 grams
Popsicle	1	15 grams
Gatorade	8 oz	14 grams
Ice cream	4 oz	15 grams
Sherbet	4 oz	22 grams
Custard	3–4 oz	18 grams
Frozen yogurt (low-fat)	4 oz	18 grams
Regular pudding	4 oz	30 grams
Sugar free pudding	4 oz	8 grams
Oatmeal	1 cup	25 grams
Chicken noodle soup	8 oz	12 grams
Tomato soup with milk	8 oz	20 grams
Carnation Breakfast Essentials with milk	8 oz	40 grams
Sugar free Carnation Breakfast Essentials w/milk	8 oz	25 grams

Sick day guidelines: Tips for young adults

Plan ahead for illness

Illnesses such as sore throats, colds, stomach flu, and infections usually raise blood sugars. If you are prepared, you can often avoid hospitalization.

- Treat most mild illnesses yourself with the key points listed below.
- Make sure you have a medical contact for questions and concerns.
- Have a sick day kit.

Key points

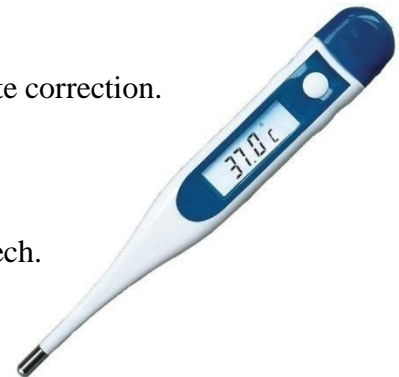
When you are sick, it is important to take care of your illness as well as your diabetes.

- Test your blood sugar every 1 to 2 hours.
- Check your urine ketones every time you go to the bathroom.
- Never skip your long-acting insulin dose, even if you aren't eating.
- If you are not able to eat solids, make sure you drink liquids.
- If you are vomiting, continue to drink clear liquids. If you can't keep clear liquids down, call your medical contact.
- If you have moderate or large ketones, call your medical contact.
- If you are vomiting, have blood sugars higher than 250, and have moderate to large ketones, call your medical contact immediately and go to the nearest emergency room.

When to call your medical contact

Call your medical contact if you:

- Have moderate to large ketones.
- Have blood sugars less than 80 or greater than 350 despite correction.
- Are vomiting.
- Can't drink fluids.
- Are confused, extremely sleepy, or are slurring your speech.
- Have severe diarrhea.
- Have a temperature over 101.5° F.
- Have symptoms of dehydration, such as dry mouth, dry eyes, sunken eyes, decreased urination.
- Have trouble breathing or have rapid deep breaths.



Sick day kit

Have a sick day kit on hand and ready **before** you need it. The kit should include:

- Regular and diet clear soda.
- Sports drinks.
- Bottled water.
- Regular and sugar free JELL-O and pudding.
- Apple juice.
- Chicken soup or broth.
- Crackers.
- Ketone strips (check expiration date often).
- Tissues.
- Cold medicines.
- Tylenol/Ibuprofen.
- Sick day chart.
- Extra blood glucose meter.
- Thermometer.



Other information

Talk to your medical contact about what medicines you can use while you are ill. Most over the counter medicines are safe to use and are considered a “free food” with less than 5 grams of carbohydrate. If you are taking any medicines that cause drowsiness, make sure someone reliable is available to wake you when you need to check blood sugars.

What is glucagon?

- Glucagon is a hormone that comes from the pancreas. It tells the liver to release sugar. It is very good at raising blood sugar.
- Glucagon is the first hormone released when blood sugar goes low in people who don't have diabetes.
- People with Type 1 diabetes don't have a good glucagon response because of the damage to their pancreas, where it is made. Too much insulin blocks the liver from releasing glucose.
- People with Type 1 diabetes use adrenaline to make their blood sugar go up. This is the hormone you feel when you are scared or excited (shaky, sweaty, fast heart rate). That's another reason why you can feel "low" without being low.

When should glucagon be given?

If you pass out or have a seizure from a low blood sugar, you need glucagon. After receiving glucagon, your glucose stores in your body are empty. Since the glucagon shot lasts only 30 minutes, be sure to eat right away after the shot. It is recommended that you consume small amounts of carb every 2 hours for the following 6 to 12 hours to replenish your body's glucose stores. Your body will need 24 hours to completely restore its glucose.

Be sure your roommates, close friends, and co-workers know how and when to use glucagon.

Can you harm someone by giving glucagon?

No. Glucagon is inside everyone. Its only job is to raise blood sugar. A person may throw up after getting a glucagon shot. If you ever need to give glucagon, turn the person onto his or her side to prevent choking if vomiting occurs.

If someone with diabetes is passed out or low because of drinking alcohol, glucagon may not help. However, it should be given anyway because it won't hurt. Be sure to call 911 right away—an IV with sugar in it will be needed.

How do you give glucagon?

A glucagon emergency kit has a bottle with glucagon powder inside and a syringe filled with a liquid. To give glucagon:

1. Make sure the hard plastic top of the bottle is off.
2. Using the syringe, squirt the liquid into the bottle. Swirl it around until it is clear.
3. Draw all of the medication out of the bottle (1 ml). Don't worry about air bubbles.
4. Push the needle into the upper leg muscle. Push the needle right through the pants if you need to, and push down on the plunger to get the medicine in.

Glucagon is a signal for the liver to release sugar. It is not sugar. It takes 10 to 20 minutes to work and only lasts 30 minutes. **If you ever need to use glucagon, call 911.** Once the person wakes up, give some sugar by mouth (like juice) if the person can tolerate it.

Depression and stress

The daily challenges of diabetes self-management can take a physical and an emotional toll on a person. Nearly half of people with diabetes will have some type of emotional problem at some point. It's important to talk with your health care team about your emotions related to having diabetes.

The most harmful effects of depression lead to poor self care or diabetes "burnout." When you get burned out, your emotions may be up and down, and you may get frustrated easily and appear angry all the time. You can also be sad or feel "flat." This is when you do not have much interest in things. Your team of professionals can help you combat burnout.

Ask for help from family and friends. Find a good counselor you feel comfortable talking with about your feelings. Remember, other issues besides diabetes can contribute to depression. There are many different treatments available, but cognitive behavioral therapy (CBT) can help with your negative thoughts and give you new behaviors to help you feel better.



Symptoms of depression

- Sad or feeling down nearly every day.
- Loss of interest or pleasure in activities you used to enjoy.
- Changes in appetite or weight.
- Problems sleeping, waking up too early, or oversleeping.
- Feeling restless or irritable.
- Decreased energy, fatigue, being "slowed down."
- Feeling hopeless, pessimistic, or negative.
- Feeling guilty, worthless, or helpless.
- Trouble concentrating, remembering, or making decisions.
- Thoughts of death/suicide or suicide attempts.
- Using drugs or alcohol to try to manage these negative feelings.

If five or more of these symptoms interfere with your daily life for at least two weeks, have your health care provider complete an evaluation for depression.

Stress

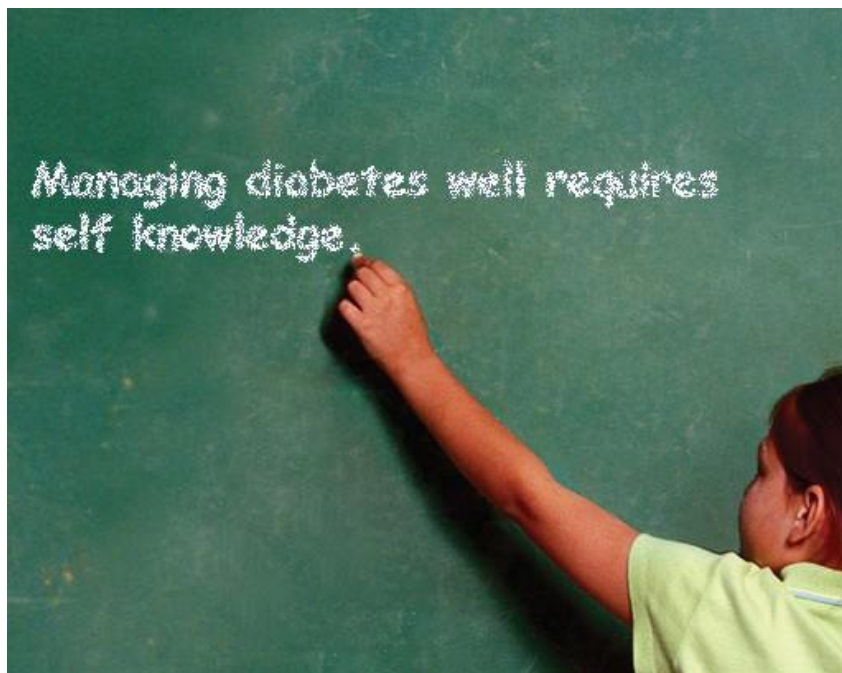
Stress from school, moving, meeting new people, learning a new area, and being more independent can lead to large swings in your blood glucose levels.

Here are some general suggestions (stress blockers) for dealing with stress and mild to moderate anxiety:

- Exercising.
- Talking with friends and family.
- Praying or meditating.
- Drawing or painting.
- Practicing relaxation techniques, such as yoga and calm breathing.
- Reading.
- Laughing (for example, watch a funny movie).
- Listening to or playing music.
- Writing in a journal.
- Making sure to get enough sleep and eat well.
- Figuring out which stressors you can eliminate and how to deal with the ones you cannot.



Can you think of any others for yourself?



Risks of alcohol and recreational drugs with diabetes

Risks from drinking alcohol

Hypoglycemia

- Alcohol on its own can lower your blood sugar.
- Symptoms of low blood sugars can be mistaken for intoxication, especially if you have liquor on your breath.
- Intoxication can mask symptoms of hypoglycemia.

Hyperglycemia

- Sugary mixers in some drinks can raise your blood sugar.
- The carb content of some alcoholic drinks is high.

“Fuzzy thinking”

- Alcohol slows brain activity and impairs judgment.
- Alcohol can make you forget to take your insulin, eat, and count carbohydrates.

Alcohol blocks the work of glucagon

- Glucagon cannot be used to treat severe low blood sugars when caused by alcohol use.
- Severe low blood sugars need to be treated in the ER with IV glucose.

Medical issues with alcohol

- Alcohol can cause liver damage.
- Alcohol can cause pancreatitis (inflammation of the pancreas) in people with uncontrolled diabetes.
- Drinking large amounts (more than three drinks per day) can raise blood pressure.
- Alcohol use can slow growth and development. It also provides no nutrition.
- Alcohol increases lipid (cholesterol) levels in the blood, especially triglycerides.
- Alcohol can lead to abuse and addiction.



Alcohol and carbohydrates

Remember, alcoholic drinks usually contain carbohydrates:

- Mixed drinks can contain carbs from the mixer (soda, juice, etc.).
- Beer contains carbohydrates:
 - About 13 g for 12 ounces of regular beer.
 - About 6 g for 12 ounces of light beer.
- Malt beverages and wine coolers have high amounts of carbs, approximately 30–40 g per 12 ounce bottle.



Tips if you are going to drink

Remember that it is illegal to drink before age 21. If you are going to drink, remember:

- Do **not** drive.
- Limit yourself to one or two drinks.
- Don't drink on an empty stomach.
- Don't overeat when you drink.
- Pay attention to the alcohol and carbohydrate content of what you are drinking
- Wear your medical ID.

Risks from recreational drugs

You should not use **any** recreational drugs, period! Recreational drugs are illegal. Despite warnings, however, some people are going to use drugs.

If people decide to use drugs, precautions need to be taken ahead of time. A limit should be set in advance. A friend who is not using drugs should watch for signs of hypoglycemia. Finally, wearing a medical ID and checking blood glucose often are good ideas.

Common drugs: Ecstasy, cocaine, heroin, marijuana, methamphetamines, and prescription and over the counter medicines used for unintended purposes (for example, narcotics, ADHD medicines, cold medicines).

- The dangers of recreational drugs are similar to those of alcohol.
- Some recreational drugs lower blood sugar; others raise it. Drugs that raise blood pressure can cause a stroke or damage to small blood vessels already at risk for damage due to diabetes (such as eyes, kidneys, and nerves).
- Recreational drugs can cover up the symptoms of low blood sugar.
- Recreational drugs are also highly addictive, dangerous, and unhealthy in many other ways.

Risks of alcohol and recreational drugs with diabetes

- Driving a car under the influence is dangerous for anyone. Add diabetes and it increases your risk of harm to yourself and others.
- Any drug (including alcohol) slows reflexes and reduces the ability to process information and make safe decisions.
- A person is more likely to make unsafe or risky decisions about food, insulin dosage, activity, and sexuality when under the influence of drugs.
- Even “legal” drugs such as prescription pain medicines and over the counter cold medicines can be dangerous and addictive.
- Any drug can cause sexual dysfunction.
- Some drugs increase appetite and can cause bingeing or overeating without insulin coverage.
- Some drugs cause decreased appetite, which could result in weight loss, risk of lows, and malnourishment.



Risks from tobacco

- Smoking is a cause of thousands of lung cancer and heart disease deaths every year.
- Smoking is double trouble for people with diabetes because diabetes already increases the risk of heart disease and kidney problems, no matter how old you are.
- Chewing tobacco is just as dangerous. The body absorbs even more nicotine from chewing tobacco than it does from cigarettes. Chewing tobacco and snuff are also linked to mouth and nose cancer.
- If you already smoke or chew, quit. Quitting can protect you from further damage from tobacco. It isn't easy, though, so talk to your health care provider about ways to quit.



Men's sexual health

Controlling blood sugars during sex

The physical exertion of sex may cause low blood sugar levels. You could reduce the dose of insulin before having sex, or eat something beforehand. If blood sugars go low, you may find that you are unable to perform as usual and cannot enjoy the experience. Discuss with your partner the potential for low blood sugar levels, the symptoms, the treatment, and how to help you. If you wear an insulin pump, you may need to disconnect it before sex.

Healthy, safer sex

As with any other person deciding to have sexual relationships, think about whether you're ready to be a parent. If you are not, you should always use birth control. Condoms are recommended to prevent sexually transmitted infections. Infections are easily transmitted during any sexual activity.

Human papilloma virus (HPV) is a leading cause of cervical cancer in women, as well as head and neck cancers in men and women. There is a vaccine available to prevent the human papilloma viruses most commonly associated with these cancers. Talk with your health care provider about getting this vaccine.

Erectile dysfunction, also known as ED

Sex is an important part of life and relationships. But diabetes can affect a man's sex life. Some men with diabetes have erectile dysfunction or ED. ED is caused by blood vessels and nerves in the penis becoming damaged and results in the inability to have or keep an erection. ED is not a normal part of life and does not happen to all men with diabetes. ED can also be caused by other conditions, such as prostate or bladder surgery. It can also be caused by medications, anxiety, or depression.

Is there a way to prevent ED?

- Maintain good blood sugars.
- Maintain good blood pressure.
- Maintain good cholesterol levels.
- If you are a smoker, stop.
- Have an exercise routine.
- If you have psychological problems or suspect this may be a cause of ED, see a mental health counselor for help.

Are there any treatments for ED?

ED can be treated in many ways, depending on whether the cause is physical or emotional. There are oral and injectable drugs, physical devices, and surgical implants. You and your health care provider can discuss which treatment would be best for you.

Depression and anxiety

Both depression and anxiety can take away your desire for sex. Medicine and counseling can help with both depression and anxiety. If you have been feeling depressed or worried for more than two weeks, talk with your health care team. See the section on depression for more information.

What your partner and diabetes health care provider should know

It may not be easy to discuss these issues with your partner, diabetes health care provider, or educator. However, talking about your concerns is the best way to receive treatment. Let your provider know if you have noticed any changes in your sex life, such as:

- A decrease in sexual desire or interest.
- Soreness and irritation after sexual activity.
- More difficulty reaching an orgasm than in the past.
- Less satisfaction with your sexual relationship now than you had before.

Will I still be able to have a family?

Diabetes does not affect your ability to become a father. However, you and your partner may have questions about starting a family. Many people with diabetes wonder if their risk of having a child with diabetes is higher for them. It is a bit higher, but not very common. If your diabetes is poorly controlled, there may be effects on your sperm. This can increase the risk of health problems for a child. Talk with your health care team if you have questions or concerns.



Women's sexual health

Hormones and monthly cycle

Some women find it hard to keep their blood sugar levels on track the week before and during their menstrual period. Your blood sugar levels may go up and down because of changes in hormone levels. During menstruation and menopause, you might have less energy and not want to exercise. If you stop exercising, your blood sugars may rise even higher. Controlling food cravings and continuing your exercise program will help you balance your blood sugar levels.

- Make a note of days when you are having your period in your log book.
- Note the effects of caffeine and alcohol on blood sugar levels during these times.
- Look for patterns and then talk with your health care team about changing your plan before, during, or after your period to keep your blood sugar levels on target.

Sex and diabetes

Sex is an important part of life and relationships. But diabetes can affect a woman's sex life. Some women with diabetes have less interest in sex because of depression or fluctuating blood sugars. Varying blood sugar levels can make some women feel tired all of the time. Or perhaps intercourse is painful because of vaginal dryness. Problems with having sex are not a normal part of getting older and don't happen to all women who have diabetes. Talk to your health care provider if you have questions or concerns.

Controlling blood sugars during sex

The physical exertion of sex may cause low blood sugar levels. You could reduce the dose of insulin before having sex, or eat something beforehand. If blood sugars go low, you may find that you are unable to perform as usual and cannot enjoy the experience. Discuss with your partner the potential for low blood sugar levels, the symptoms, the treatment, and how to help you. If you wear an insulin pump, you may need to disconnect it before sex.

Healthy, safer sex

As with any other person deciding to have sexual relationships, think about whether you're ready to be a parent. If you are not, you should always use birth control. Condoms are recommended to prevent sexually transmitted infections. Infections are easily transmitted during any sexual activity.

Human papilloma virus (HPV) is a leading cause of cervical cancer in women, as well as head and neck cancers in men and women. There is a vaccine available to prevent the human papilloma viruses most commonly associated with these cancers. Talk with your health care provider about getting this vaccine.

Birth control and diabetes

Options for birth control range from abstinence to the pill and shots, to barrier methods such as condoms. Birth control pills and shots are now available with lower doses of estrogen and progestin, so the risk of heart attacks or strokes is reduced.

- Women on the pill or shot who smoke are at greater risk for circulation problems. Smoking causes the blood vessels to narrow, the walls of the vessels to thicken, and the blood to clot. That's why it is important for a woman to quit smoking.
- High A1C levels (indicating poor blood sugar control) or being dehydrated may also increase your chances of having problems with your blood clotting.
- Women on the pill need to have their blood fats and blood pressure checked regularly.
 - If you have high blood pressure or high cholesterol, you may need to use a different method of birth control. Taking the pill when you have high blood pressure can increase the chance of eye or kidney disease.
 - The pill can also cause blood cholesterol and triglyceride levels to rise.
- Birth control shots can cause lower estrogen levels, which can decrease bone strength and increase the risk for osteoporosis. Staying physically active can help improve bone strength.
- Barrier methods, such as the diaphragm or condoms, have no effect on blood sugar or cholesterol. Speak with your provider about the best options for you.



Sexual problems

The damage that high blood sugar levels in diabetes can do to your blood vessels and nerves affects both circulation and sensation. Persistent high blood sugar levels can increase your chance of vaginitis (inflammation of the vagina) or yeast infections. If you have unusual discharge from the vagina, itching, or yeast infections, talk with your health care provider about the best treatment.

High blood sugar levels can also decrease your energy and sense of vitality. Feeling sluggish and tired can interfere with how attracted and receptive you are to engaging in sexual activity. Some medicines can interfere with your desire to have sex. Others may cause dryness of the vaginal tissue, which leads to painful intercourse. Ask your health care provider about the effects of your medicines on your sexual health.

Depression and anxiety

Both depression and anxiety can take away your desire for sex. Medicine and counseling can help with both depression and anxiety. If you have been feeling depressed or worried for more than two weeks, talk with your health care team. See the section on depression for more information.

What your partner and diabetes health care provider should know

It may not be easy to discuss these issues with your partner, diabetes health care provider, or educator. However, talking about your concerns is the best way to receive treatment. Let your provider know if you have noticed any changes in your sex life, such as:

- A decrease in sexual desire or interest.
- Vaginal dryness or tightness with intercourse.
- Pain or discomfort with intercourse.
- Soreness and irritation after sexual activity.
- More difficulty reaching an orgasm than in the past.
- Less satisfaction with your sexual relationship now than you had before.

Will I still be able to have a family?

Diabetes does not affect your ability to become a mother, but it is considered a high-risk pregnancy. You need to work closely with your health care provider so that you and your baby are healthy. You and your partner may have questions about starting a family. Many people with diabetes wonder if their risk of having a child with diabetes is higher for them. It is a bit higher, but not very common. Talk with your health care team if you have questions or concerns.

Pregnancy

What you should know

- Having diabetes makes your pregnancy high risk.
- You need to see a diabetes health care provider and get your diabetes in good control before you get pregnant.
- It's very important that blood sugar levels be in the target range during the first 6 weeks of pregnancy. This is when the baby's organs are forming.
- If your diabetes is well controlled and you see your doctor every month, your chances of having a healthy baby and staying healthy yourself are as good as those for a woman without diabetes.
- Uncontrolled blood sugars can harm your reproductive health.
- Babies born to mothers with poorly controlled diabetes have a greater risk of birth defects. High blood sugars and ketones pass through the placenta to the baby. These increase the chance for birth defects.
- When extra sugar is in the blood, the baby is "fed" extra sugar. Excess sugar can make the baby too big. This can make it harder to deliver the baby.
- You need a plan that keeps meals, exercise, and insulin in balance. This plan will change with pregnancy.

- Check your blood sugars more frequently (6 to 10 times a day) and keep a good record of the results.
- Other medications used in diabetes, such as cholesterol-lowering drugs and ACE inhibitors, are not recommended during pregnancy.

Tips for pregnancy

- You need good prenatal care during your pregnancy. You should see a high-risk obstetrician for your prenatal care. Your body will change as the baby grows, and these changes will affect your blood sugars. Pregnancy can also mask the symptoms of low blood sugars. During pregnancy you have an increased risk of headaches, DKA, urinary infections, and pre-eclampsia.
- You may need to increase your insulin doses while pregnant, especially during the last three months. The need for more insulin is caused by hormones the placenta makes. These hormones help the baby grow. At the same time, these hormones block the action of the mother's insulin. As a result, your insulin needs will increase.
- Work with a dietitian to make changes in your meal plan to avoid problems with high and low blood sugars. You should expect to gain 25 to 35 pounds if you start out at a normal weight. If you are overweight, you should gain about 15 to 25 pounds.
- Discuss exercise with your diabetes team. Ask for guidelines. Exercise can help you stay healthy during your pregnancy. In general, it is not a good idea to start a new strenuous exercise program during pregnancy. Good exercise choices for pregnant women include walking, low-impact aerobics, swimming, or water aerobics.
- As your due date nears, your health care provider will study your health and your growing baby. You and the team will then discuss the best time and method for delivery. At the start of active labor, your insulin needs will drop. You will most likely not need any insulin during labor and for 24 to 72 hours after delivery. Home births are not advised because of the care needed for both mother and baby.
- After delivery, there may be a time of odd blood sugars. You may need to consider night time snacks.
- If your blood sugar level is high during labor, the baby may have hypoglycemia once the cord is cut. This may occur 1 to 3 hours after birth and should be checked for the first two days of life. With Type 1 diabetes, your child is only a little more likely to develop diabetes (1% to 4%).



Other women's health issues

Osteoporosis and diabetes

As women age, bones tend to become weaker, increasing the risk for osteoporosis. Osteoporosis is a condition in which the bone mass is lost as a result of losing minerals and protein. Bones become fragile and break easily. Even though all humans lose a little bone mass, not all women are at risk for osteoporosis.

Risk factors for osteoporosis

You are at more risk if you are a smoker, thin, fair skinned, have menopause early, have been on steroid therapy, or have had prolonged high blood sugar levels. In addition, if you do not take enough calories or calcium, or you have a history of anorexia or bulimia, your bones have not received the nutrients they need to stay strong.



Ways to prevent osteoporosis

- Engage in weight-bearing exercise, which is the best way to increase muscle mass and protect your bones.
- Stop smoking! Smoking makes it harder for the body to absorb calcium, leaving bones fragile and thin.
- Eat balanced meals that have enough calcium, phosphorus, and vitamin D. Ask a dietitian how you can increase these minerals in your diet.
- Keep your diabetes under control!

Diabetes and your career

Tips for merging diabetes care with your career

- **Decide who to tell.** It may be best to tell your employer after you get a job offer or after you have started work. The law protects against discrimination due to health care issues. Employers cannot ask about your health at pre-employment interviews. It might be in your best interest to let a few trusted co-workers or your boss know after you start. Depending on how often you have hypoglycemia, you may decide to let those you work with most frequently know of the signs and symptoms of hypoglycemia and how they can help you if needed.
- **Wear medical identification.** Whether or not you tell anyone at work, you should wear some form of medical ID. If emergency personnel are ever called to help you, they will be informed of your condition.
- **Give co-workers a chance.** Don't assume that everyone knows as much about diabetes as you. Be patient with your co-workers as they learn about the disease and ask questions. They may make comments about things such as you choosing desserts with your meals, not knowing this is allowed. Take this opportunity to teach them.
- **Get it in writing.** You may need a note from your health care provider stating your need to manage your diabetes at work, including blood glucose monitoring and snacks if needed. The Americans with Disabilities Act requires that all employers provide "reasonable accommodations" for health care issues. If you are having difficulty with an employer, contact the Equal Employment Opportunity Commission for help.
- **Don't abuse the system.** Try to schedule appointments at convenient times during the day. Don't use diabetes as an excuse for things you may not want to do at work.
- **Plan ahead.** Have snacks with you at all times and close to your work area.
- **Take your supplies with you.** Always carry your monitor and supplies with you and keep them in an accessible area.
- **Revisit your treatment.** If you are worried about drawing attention to yourself with the use of a syringe and vial, consider new therapies such as insulin pens or an insulin pump.
- **Maintain good diabetes control.**

Don't let diabetes hold you back. You can do anything you want.



Insurance with diabetes

Because diabetes is a pre-existing condition, it is important to maintain health care coverage at all times. It is also important to anticipate changes. In other words, plan ahead and do not let your health care coverage run out. You may have trouble getting it again. Medical care is expensive.

Where to get insurance

- Parents (if you live at home and/or are enrolled in school)
- Employer
- Student health insurance plans
- Self insurance
- Wisconsin state programs – HIRSP, BadgerCare
- Local medical assistance programs

Insurance tips and options

- When possible, **stay in school**. Many insurance companies let you stay on your parents' health care plan until you are 26 if you are a full-time student.
- Open enrollment. When you are looking for work, ask about open enrollment for health insurance. Open enrollment means that you can usually get insurance despite pre-existing conditions.
- If you change jobs, check with your human resources department about *COBRA* *before* leaving your current job. It lets you use your existing insurance until you get new insurance. You will have to pay for it, and it is generally expensive.
- **Public aid:** Persons without insurance and with low or no income generally qualify for public assistance. Program names, eligibility, and application procedures vary from county to county. Check with the Wisconsin Department of Health Services (<http://www.dhs.wisconsin.gov/>) or your state's department of health services.
- **Wisconsin BadgerCare:** This is a program for Wisconsin residents. It provides health care coverage to uninsured families. Some families will need to pay a premium. The premium amount depends on your family income. Call (800) 362-3002 for more information.
- **HIRSP:** The Wisconsin Health Insurance Risk Sharing Program is available to people who can't get insurance because of pre-existing conditions. There is a six-month waiting period for coverage for pre-existing conditions. The address is:

HIRSP
6406 Bridge Road, Suite 18
Madison, Wisconsin 53784-0018
(800) 828-4777 or (608) 221-4551

Plan ahead for lapses in health care coverage.

References

www.childrenwithdiabetes.com

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- Fact Sheet: Diabetes and Postsecondary Education
- Going to College with Diabetes: A Self Advocacy Guide for Students
- Your Job and Your Rights: Fighting Discrimination Based on Diabetes in the Workplace

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