Section 9: Special Circumstances for Students with Diabetes

SECTION OVERVIEW
- Planning for School-Sponsored Activities
- Disaster Planning
- Eating Disorders
- Celiac Disease
- Illegal Drugs, Alcohol, and Tobacco Use
- Emotions
- Depression in Students with Diabetes
- Teen Pregnancy
- Sick-Day Management
- Medical Home
- Diabetes Across the Life Span
- Transitioning to Adulthood/Life After High School

Planning for School-Sponsored Activities

School-sponsored activities (e.g., field trips, overnight trips, bus trips) require advanced planning. Parents/guardians must work with the school nurse and school personnel to preplan for these events and determine how the needs of the student with diabetes will be met. The following checklist identifies diabetes supplies that should be available during all school-sponsored activities:

Checklist for School-Sponsored Activities

- A copy of the student’s Diabetes Medical Management Plan (DMMP), Section 504 Plan, Emergency Action Plan, and Healthcare Plan
- Blood glucose monitor and test strips
- Fast-acting carbohydrate source (e.g., milk, fruit juice, glucose gel, glucose tablets)
- Bag lunch or snack (optional)
- Injection/insulin pump supplies and insulin with appropriate storage to prevent spoilage of insulin (if using insulin)
- Continuous glucose monitor (CGM) information
- Glucagon kit (if using insulin)
Section 9: Special Circumstances for Students with Diabetes

Schools need to ensure trained school personnel are available to assist and protect a student’s health and safety during school-sponsored activities. For students with diabetes, school districts are required to send a chaperone who is a school district appointee. This designated person must be trained to assist the student in routine and emergency care. A school district appointee or family member of the student, if the family member is willing and able to accompany the student, can serve as a chaperone. Parental attendance at a field trip can not be required for the student to participate. This person must be informed of and provided with instructions regarding the student’s diabetes care in a confidential manner.

Emergency Glucagon administration may be necessary in the event of a severe low blood glucose episode during any school-sponsored activity. If a school nurse is not available during a school-sponsored activity, designated and trained school personnel must be identified as the primary contact for questions or concerns, and be capable of responding to an emergency.

Field trips and bus trips require advance planning. Federal law states that students with diabetes can eat a scheduled or additional meal/snack on the bus if necessary. Parents/guardians should work with the school nurse or designated school personnel to determine special instructions and needs of the student and how to meet these needs during travel.

Arriving before and/or staying after school requires planning in advance. Blood glucose monitoring, after-school snacks, changes in physical activity, and/or insulin injections are routine for students with diabetes and must be accommodated in any school-sponsored activity. These before- and after-school diabetes routine needs are commonly identified in the Section 504 Plan.

Disaster Planning

Schools, parents/guardians, and students need to plan ahead and prepare in the event of a disaster or other event (e.g., lock-down). Regardless of the type of disaster, disruption to the diabetes plan of care may occur. Disasters and other events, including ice storms, blizzards, tornados, fires, earthquakes, or more recent concerns about terrorist attacks, have increased awareness of the need to be prepared in the event of a disaster.

Students and their parents/guardians need to take time to plan ahead and prepare for an emergency of any kind, including an evacuation or lock-down at school. Having adequate diabetes care supplies available in the event of an emergency is important. Wearing medical identification enables colleagues, school personnel, and emergency medical personnel to identify and address medical needs of students with diabetes.

Parents/guardians can work with schools to identify school personnel who will assist in the event of a disaster or other event. Students living away from home should consider informing their colleagues, friends, and extended family members about their diabetes and where their emergency supply kit is kept. These strategies can make a difference in maintaining blood glucose control in an emergency situation. For more resources on emergency and disaster planning, refer to Section 16: Resources.
Section 9: Special Circumstances for Students with Diabetes

Eating Disorders

Anorexia nervosa and bulimia nervosa are two eating disorders that can cause long-term negative health outcomes for any student, including those with diabetes. Anorexia nervosa involves a severe, self-imposed restriction of food often accompanied by excess levels of physical activity. Bulimia nervosa involves binge eating followed by purging (vomiting). Bulimia may also involve the use of diuretics and laxatives.

Eating disorders can contribute to both short- and long term medical and health consequences. Eating disorders occur more frequently in females; however, eating disorders are being identified in males. Students with type 1 or type 2 diabetes may show warning signs of eating disorders (e.g., eat tiny amounts, deny hunger, eat in private, leave room immediately after eating).

Students with an eating disorder may manipulate their insulin regimens or may purposefully not take their insulin. Some students with type 1 diabetes (especially those with weight concerns) may intentionally eliminate insulin to cause weight loss. This dangerous behavior can result in poor blood glucose control, lead to the presence of ketones in urine/blood (with unusually high occurrences), and possibly lead to DKA, or even death. Eating disorders require specialized treatment and intervention. Early detection and referral to a specialist who works with eating disorders is essential.

Celiac Disease

Celiac disease is an autoimmune disorder that results in inflammation in the upper small intestine when gluten (e.g., wheat, barley, or rye) is eaten. With celiac disease, the lining of the small intestine becomes inflamed and flattens out, making it hard for food and nutrients to be properly absorbed. Celiac disease is more common in people with type 1 diabetes. About 10% of children and 2% of adults with type 1 diabetes have celiac disease, compared to just 1% of the general population. Celiac disease is commonly diagnosed between two and five years after the diagnosis of type 1 diabetes. Celiac disease is also referred to as gluten-sensitive enteropathy, nontropical sprue, or celiac sprue.

People with celiac disease often have common gastric symptoms (e.g., diarrhea, abdominal pain, and bloating); however, some people may not have any of these symptoms. Undiagnosed or untreated celiac disease poses increased risk of developing low blood glucose due to poor absorption of food in the small intestine. Adjusting insulin regimens and careful blood glucose monitoring is required. The only known treatment for celiac disease is a strict, lifelong, gluten-free diet. To remove gluten entirely from the diet is very difficult, as hidden sources of gluten are in many processed foods, non-food items, and medications. Seeking support from a registered dietitian with expertise in celiac disease is critical. Helpful resources for those with celiac disease can be found at: www.celiac.com.
Section 9: Special Circumstances for Students with Diabetes

Illegal Drugs, Alcohol, and Tobacco Use

For students with diabetes, use of illegal drugs and alcohol can complicate diabetes management. Increased alcohol can be associated with episodes of depressive disorders, disruptive behavior, illegal drug use, and daily tobacco use.

Like alcohol, use of drugs such as marijuana, amphetamines, ecstasy, and cocaine can affect diabetes self-management and blood glucose control. Data indicate that student drug use can lead to poor choices and increased risk-taking behaviors. Illegal drug use and/or alcohol use may increase the risk of diabetes emergencies. Low blood glucose risk is increased if a student uses alcohol and/or illegal drugs and/or skips a meal after taking insulin.

Tobacco use is commonly associated with alcohol and illicit drug use, acting as a “gateway drug.” Students with diabetes who use tobacco increase their risk of diabetes-related complications. In Wisconsin, a total of 21% of high school students and 4% of middle school youth are current cigarette smokers. Furthermore, 7% of high school students and 2% of middle school youth are current users of smokeless tobacco.

Cigarette smoking during childhood and adolescence produces significant health problems among young people, including an increase in the number and severity of respiratory illnesses and decreased physical fitness.

Resources to help students and families quit smoking are available in Section 16: Resources. Resources are also available in Section 16 for students on dealing with peer pressure and for parents on how to talk with your child about difficult topics.

Emotions

Dealing with various emotions and feelings are sometimes a challenge for a student with diabetes and his or her family. Understanding how different feelings and emotions can impact diabetes self-care and management is important. Positive self-management and attention to diabetes self-care can be related to emotional and psychological health. Students with diabetes will vary in their ability to cope with the demands of diabetes. Negative feelings and emotions must be taken seriously and carefully monitored. Poor coping strategies can lead to low self-esteem, low self-worth, lack of confidence, poor self-image, and other emotional and psychological disorders, including depression.

The diagnosis of diabetes can have a major impact on the entire family. Each family member may be affected and may deal with the diagnosis individually. Emotions and feelings can change as the student goes through different stages of development. Dealing with feelings openly can help the student with diabetes and his or her family learn to adapt to the daily challenges of diabetes. Feelings and emotions experienced by students with diabetes and/or their family members may include:

Denial

“This can’t really be happening.”

“I don’t need to take my insulin today.”

“It’s not that serious.”

12 Disclaimer: The legal drinking age in Wisconsin is 21 and illicit drug use is illegal. While authors of this Guide do not condone underage drinking or illicit drug use, we understand the reality that young adults may choose to drink alcohol and/or use illicit drugs.
Students with diabetes and/or family member(s) at times may find it difficult to talk about having diabetes. At times, the student or parent/guardian may try to hide his or her feelings to be “strong” or not to upset their family. Denial can interfere with the student’s ability to adjust to the daily tasks needed for optimal self-management.

Asking a student how he or she is feeling about having diabetes and encouraging the student to talk about how he or she is feeling can assist in addressing denial. If denial is suspected, securing help from a professional is essential. School counselors, social workers, school nurses, pediatricians, child psychologists, or behaviorists are examples of professionals that can assist a student and/or family.

Sadness

“I don't want to think about my diabetes.”

“Yesterday I did not want to go out and play.”

“I cry in my bedroom.”

Students with diabetes or family members may feel sad, down, depressed, or hopeless. Sadness lasting for more than just a brief period can lead to depressed or hopeless feelings and prevent a student from attending school or participating in activities he or she once enjoyed. Changes in sleep or eating patterns, increased isolation, or decreased social interaction are signs of depression. Sadness, like any other emotion, must be acknowledged. Sharing feelings about how sad one feels is important. If sadness continues or appears to increase, seeking help from an experienced professional is essential.

Anger

“Why did this happen to my child?”

“I don't care about my blood sugars!”

“This isn't fair!”

“I don't want to take any more shots.”

“I hate having diabetes.”

Anger is a normal feeling and coping strategy. Anger can interfere with self-management of diabetes. Anger can be turned inward (targeted toward self) or outward (targeted toward someone else, such as health care providers, friends, siblings, or teachers). Prolonged and/or unresolved anger can have negative consequences when it is not managed or expressed appropriately or effectively.

Finding healthy ways to address and resolve anger is essential. Physical activity is a positive coping strategy that may help a student or family member feel less anger. Practicing relaxation techniques can also help to decrease anger. Seeking support from others or from a professional can assist a student in learning healthy ways to cope.

Fear

“What will this mean for my daughter’s life?”

“What's going to happen when I go to school?”

“I am so scared to ever leave him alone.”

“I'm afraid to go on an insulin pump.”
Section 9: Special Circumstances for Students with Diabetes

Fear is a normal, natural, and, many times, healthy response. Fear is usually a perceived feeling in response to a stressful situation or event. A student and/or family member may feel or express fear from time to time. Parents'/guardians' fears are sometimes related to responsibility and expenses, while a student's fears may be about the future and his or her ability to manage diabetes.

Fear should never keep a student with diabetes from joining an activity or event. Professional support and counseling can help students learn how to address their fears, as well as gain faith and trust in themselves while learning positive ways to cope.

Guilt

“I ate too much, and that is why my blood sugar is high.”
“Idid not eat the right food.”
“I didn’t exercise.”
“I gave myself too much insulin and caused the low blood sugar.”
“I am overweight, and it is all my fault.”

Guilt is commonly a feeling of responsibility or remorse for a wrongdoing that is either real or imagined. For example, students may feel that they overate with friends, causing their blood glucose to rise too high. Parents/guardians may feel their action or lack of action caused the diabetes or a high blood glucose. A student may feel guilty if he or she sneaks extra candy, skips testing blood glucose, or lies about blood glucose results. Parents/guardians may feel guilty when they have to enforce the “rules” of self-management or limit a treat for their child. These examples are common and may lead to guilt and blame.

Talking about feelings of guilt is important. Giving students permission to “let go” of their guilt is positive, especially if a positive behavior results. Seeking help from an experienced professional can assist a student in learning healthy ways to cope with guilt.

Depression in Students with Diabetes

Depression is common in people with diabetes, including students. Depression in children younger than six years is rare. Approximately 2 percent of elementary-school-aged children experience depression. Rates of depression dramatically increase during adolescence, affecting up to eight percent of U.S. teenagers.

Depression can lead to poor self-management (e.g., adherence to meal plans, blood glucose testing schedules, decreased physical activity), which can lead to high blood glucose levels and increased risk of short- and long-term complications. Depression can be mild, moderate, or severe. Typical symptoms of depression are:

- Decreased ability to cope with changes or challenges of growing up
- Crying spells for no apparent reason
- Changes in sleep patterns
- Changes in weight or appetite
- Fatigue or loss of energy
- Changes in ability to concentrate
- Increased promiscuity
Section 9: Special Circumstances for Students with Diabetes

- Increased negative attitude
- Loss of interest in normal daily activities or things once enjoyed
- Feeling sad and down
- Feeling guilt, hopelessness, or worthlessness
- Thoughts of death or suicide

Awareness of the potential for depression in students with diabetes is important. Often, lack of essential diabetes self-care is seen as “non-compliant” when, in fact, it can be a sign of depression. Early recognition of depression symptoms, appropriate referral, and prompt treatment can lead to improved diabetes self-care and quality of life. Depression may involve recurrent periods; therefore, ongoing assessment and monitoring is essential.

Teen Pregnancy

Teen pregnancies are commonly unintentional. It is critical that teens with diabetes who are of childbearing years be counseled on effective birth control and contraception to prevent unintended pregnancy. Teen pregnancy for a student with type 1 or type 2 diabetes presents multiple health risks for the baby and mother. Optimal blood glucose control is essential prior to conception and/or at conception and/or during pregnancy to reduce risk of complications to the fetus and mother. Early prenatal care is critical.

Sick-Day Management

Sick-day management is critical to reduce high blood glucose (hyperglycemia) and prevent diabetic ketoacidosis (DKA). Most families have been given a sick-day plan from their health care provider and should be familiar with this plan. This sick-day plan commonly includes information regarding increasing fluids and insulin amounts during sick days. Sickness or illness, whether physical or emotional, places stress on the body and raises the body’s energy requirements. Therefore, any illness or stress could raise blood glucose levels. The presence of high blood glucose should be a signal to initiate ketone testing should a student come to school sick or becomes sick during school. An important aspect of diabetes management and care during sickness or illness is to assess the presence of ketones either in the blood or urine. Ketones should be checked at the onset of the flu, a cold, sore throat, or any other illness.

Flu-like illness with nausea, vomiting, or diarrhea can increase the risk of dehydration. Therefore, students may be at higher risk of DKA and dehydration during periods of illness. Maintaining or increasing sugar-free fluid intake is essential during illness.

The student’s Diabetes Medical Management Plan (DMMP) should provide sick-day guidelines and recommendations during school. Managing diabetes during sickness and/or illness requires special care and management usually including guidance from the student’s health care team. A student’s parents/guardians will likely need to be notified and the student sent home. The family commonly follows the student’s at-home sick day treatment plan and communicates frequently with the health care team to assess and monitor status and tailor the needs of the student.
Medical Home

All children and adolescents with special health care needs should receive coordinated, ongoing, comprehensive care within a medical home. A medical home is an approach to providing comprehensive primary health care in a high quality and effective manner to children, adolescents, and adults.

The ideal medical home includes a primary care provider or specialist and diabetes team who work in partnership with parents. This partnership expands to school once the child is of school age. This partnership can assist in maximizing coordination of services in transitioning to school. The Wisconsin Division of Public Health’s Children and Youth with Special Health Care Needs Program offers information and resources on medical home for children and adolescents in Wisconsin. For more information, see: http://dhs.wisconsin.gov/health/children/.

Diabetes Across the Life Span

Taking care of diabetes is a lifelong process. Experts have identified core messages for maintaining health at every stage of life. The diagram “Healthy People at Every Stage of Life Framework: Core Messages,” found in Section 14: Tools, provides an overview of one model that lists important messages to provide to people at every stage of life. Diabetes care and management can be incorporated into this model for each of the various life stages. Children and adolescents start this process early through care and guidance provided by parents/guardians in an attempt to start strong and grow safely and strongly. As children and adolescents with diabetes grow and develop, they will learn to adapt to the day-to-day task of managing and controlling their diabetes, attempting to achieve healthy independence. Diabetes care needs change across the life span. Table 14 provides age-related developmental responsibilities and provides potential diabetes-related responsibilities and abilities across the life span (0-18 years old).
### Table 14: Age-Related Responsibilities and Traits

<table>
<thead>
<tr>
<th>Age</th>
<th>Non-diabetes-related</th>
<th>Diabetes-related</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3 years</td>
<td>• Developing gross motor skills</td>
<td>• Parents/guardians must do all care</td>
</tr>
<tr>
<td></td>
<td>• Developing speech skills</td>
<td>• Acceptance of diabetes care as part of daily life</td>
</tr>
<tr>
<td></td>
<td>• Learning to trust</td>
<td>• Inconsistent with food choices; often give shots after seeing what is eaten</td>
</tr>
<tr>
<td></td>
<td>• Responding to love</td>
<td></td>
</tr>
<tr>
<td>3-7 years</td>
<td>• Imaginative/concrete thinkers</td>
<td>• Parents/guardians must do all care</td>
</tr>
<tr>
<td></td>
<td>• Cannot think abstractly</td>
<td>• Gradually learns to cooperate for blood glucose tests and insulin injections</td>
</tr>
<tr>
<td></td>
<td>• Self-centered</td>
<td>• Inconsistent with food choices; may still need to give injections after meals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gradually learns to recognize low blood glucose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Undeveloped concept of time</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adult needs to do all insulin pump management</td>
</tr>
<tr>
<td>8-12 years</td>
<td>• Concrete thinkers</td>
<td>• Can learn to test blood glucose</td>
</tr>
<tr>
<td></td>
<td>• More logical and understanding</td>
<td>• At age 10 or 11, can draw up and give injections, although may still need supervision</td>
</tr>
<tr>
<td></td>
<td>• More curious</td>
<td>• Can make own food choices; can learn initial carbohydrate counting</td>
</tr>
<tr>
<td></td>
<td>• More social</td>
<td>• Does not appreciate that doing something now (e.g., controlling blood glucose levels) can help prevent problems later (e.g., diabetes complications)</td>
</tr>
<tr>
<td></td>
<td>• More responsible</td>
<td>• Can recognize and treat low blood glucose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• By 11 or 12 years, can be responsible for remembering snacks, but may still need assistance of alarm watches or parent/guardian reminders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can do own insulin pump boluses, but needs adult help to remember and calculate</td>
</tr>
<tr>
<td>13-18 years</td>
<td>• More independent</td>
<td>• Capable of doing the majority of injections or insulin pump management and blood glucose testing, but still needs parental involvement and review to make decisions about dosage</td>
</tr>
<tr>
<td></td>
<td>• Behavior varies</td>
<td>• Knows which foods to eat; can do carbohydrate counting</td>
</tr>
<tr>
<td></td>
<td>• Body image important</td>
<td>• Gradually recognizes the importance of good blood glucose control to prevent later complications</td>
</tr>
<tr>
<td></td>
<td>• Away from home more</td>
<td>• May be more willing to inject multiple injections per day</td>
</tr>
</tbody>
</table>

Section 9: Special Circumstances for Students with Diabetes

Diabetes camps are one excellent way to assist students in learning how to adapt to living with diabetes and help children and adolescents prevent diabetes from interfering with anything they hope and dream to do someday.

In Wisconsin, the Wisconsin Lions Foundation and the American Diabetes Association sponsor two, one-week sessions of camp for children and adolescents with diabetes. For more information on this camp, refer to the Diabetes Camp Flyer in Section 14: Tools.

Many additional resources and educational tools are available for students and families in Section 16: Resources.

Transitioning to Adulthood/Life After High School

The year after high school graduation is full of change. Students may face diabetes challenges whether they continue their schooling or enter the work world. Independence is exciting and at the same time very frightening. To prepare for life after high school, students are encouraged to evaluate their current self-management skills. Below are tips students may find helpful:

- Make a list of diabetes supplies and stock up to keep from running out
- See current health care provider, diabetes educator, and dietitian prior to leaving home
- Ensure immunizations are current (including flu, meningitis, and hepatitis B)
- Obtain new prescriptions from health care provider
- Identify a pharmacy located near school or residence
- Locate health care services in the new area and inquire about their costs (e.g., student health, urgent care, emergency room)
- If attending school away from home, set up a visit with the student health center to discuss diabetes care and treatment plan; provide a copy of medical records
- Purchase a medical ID bracelet or necklace and wear it
- Identify where to properly dispose of sharps
- Contact the new school’s disability office to secure a Section 504 Plan and Americans with Disabilities Act accommodations

For prescription mail order service, communicate the new mailing address to the prescription service to ensure supplies are sent to the correct address.

Wisconsin Statute §632.885 outlines insurance options to dependents age 18 to 27. Dependents under age 27 qualify, provided that:

- They are unmarried
- They are not eligible for coverage under a group plan offered by their employer where the premium contribution would be less than the premium amount for his or her coverage as a dependent (i.e., it is cheaper to insure them as a dependent than for them to get coverage through their own employer)

Parents/guardians should seek guidance and clarification in interpreting Wisconsin Statute §632.885, related to coverage of their dependent student, including general eligibility status and rules that may apply for adult dependents 27 years and older. Talking with an employer benefit specialist in advance of the student turning 27 may be a helpful option.
Section 9: Special Circumstances for Students with Diabetes

Social Life
Social life with peers may center around drinking. Some young adults choose not to drink alcohol and, therefore, seek out events that do not involve drinking. However, other young adults choose to drink alcohol; these young adults should know that alcohol increases the risk for low blood glucose levels for six to 36 hours after drinking has ended. Alcohol interferes with recognizing low blood glucose symptoms (hypoglycemia).

Young adults choosing to drink should remember to:
- Eat before and while drinking
- Set limits ahead of time and stop drinking when limits are reached
- Make sure someone with them knows they have diabetes and can help them if they develop low blood glucose (hypoglycemia)
- Test blood glucose levels while drinking and carefully monitor for at least 24 hours after drinking alcohol
- Never drink and drive

Sick Days
Sick-day management is critical to reduce high blood glucose (hyperglycemia) and prevent diabetic ketoacidosis (DKA). Managing diabetes during sickness and/or illness requires special care and management usually including guidance from the student’s health care team. Young adults should consider the following to prepare for sick-day management:
- Create a sick-day plan; if a young adult does not have a sick-day plan, he/she should work with his/her health care team to create one before leaving home.
- Stock up on cold/flu remedies to take when sick.
- Know how to adjust insulin.
- Be aware of symptoms that should prompt a call to a health care provider.
- Keep sick-day foods on hand (e.g., regular and sugar-free caffeine-free soft drinks, regular and sugar-free pudding and gelatin mixes, juice, instant soup mix, and crackers).
- Keep ketone strips and a thermometer on hand and in a convenient place.

Telling Friends about Diabetes
Telling people about having diabetes is a personal choice. In the event of an emergency, a friend should know how to help. A young adult’s life is at risk if a severe low blood glucose episode happens and no one knows what to do. Things to consider:
- Inform roommate(s), resident advisor, neighbor(s), co-workers, or new friends about having diabetes
- Explain low blood glucose (hypoglycemia) to key people, its symptoms, and actions to take
- Direct friends to call 9-1-1 in the event of a severe low blood glucose episode
- Select someone to be trained to give Glucagon
- Inform coach and teammates about how to treat low blood glucose (hypoglycemia)
- Wear emergency identification

For more resources on transitioning out of high school, refer to Section 16: Resources.

13 Disclaimer: The legal drinking age in Wisconsin is 21. While authors of this Guide do not condone underage drinking, we understand the reality that young adults under age 21 may choose to drink alcohol. The information below pertains to both young adults 21 years and above, as well as young adults under age 21 who choose to drink alcohol.