



**Health Office Orientation:**  
*Diabetes and the New School Nurse*

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*I, Katherine Park, disclose the absence of personal financial relationships with commercial interests relevant to this educational activity within the past 12 months.*



The purpose of this presentation is to assist new school nurses during the complex process of managing Type 1 diabetes.



This will help support student learning by promoting safe and effective diabetes management for students at school.

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**My Background**

-  Personal interest in diabetes
-  Experience working with students with type 1 diabetes (Pre-K through 12th grade) for past 18 years
-  Great diversity and complexity – hard to achieve a perfect plan of care with diabetes
-  Master's degree focus
-  Current doctoral degree focus
-  Continually working to address this topic district-wide, with a focus on elementary-age students

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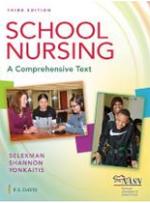
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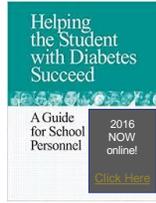
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Resources that Correspond to this Module



Chapter 25. Students with Diabetes



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Part 1: What does a new school nurse need to know *right now*?



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Two Things to Start With:



Educate and train



Learn about equipment and processes that make diabetes care possible

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Educate and train

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Medical care providers don't always address school-specific issues such as field trips, extra snacks, parent communication, physical activity, student skill level, training additional staff, or class parties



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**Diabetes management is 24/7 and does not go away while a child attends school**

-  Nearly 20,000 youth under age 20 are newly diagnosed each year in the U.S. with type 1 diabetes
-  Poor diabetes control in youth is linked to increased health complications (kidney, neurological, etc.)
-  Outdated school policies, lack of school cooperation, and poorly trained school staff contribute to the daily difficulties youth encounter while trying to manage their diabetes care at school

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### What Is Effective Diabetes Management at School?

**Maintaining Optimal Blood Glucose Control**  
The goal of effective diabetes management is to keep blood glucose levels within a target range determined by the student's personal diabetes health care team.

**Assisting the Student with Performing Diabetes Care Tasks**  
Diabetes management is needed 24 hours a day, 7 days a week.

**Designating Trained Diabetes Personnel**  
The school nurse has a critical role in training and supervising trained diabetes personnel to ensure the health and safety of students with diabetes.

(Helping the student with diabetes succeed: A guide for school personnel, 2016)

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### School Nurse Tasks

Meet	Assess	Educate	Train	Know	Acquire
Meet with parent(s) and student in person if possible before student begins school  If not able to do this, plan an unannounced phone meeting	Assess and observe student for knowledge and independence with skills  Determine what specific plans the student may need (504, IEP, etc)	Schedule briefing of all building staff on signs/symptoms of diabetes, if this has not been done recently  Organize in-depth, student-specific briefing for staff who will work directly with student	Train 1 or more staff as Trained Diabetes Personnel using hands-on equipment if available	Learn about diabetes basics  Know federal laws, state laws, school district policies, and Missouri Nurse Practice Act as pertains to diabetes care and delegation	Acquire diabetes resources  Utilize outside agencies when needed (public health department, local hospitals, neighboring school districts) to form partnerships and coordinate additional training when needed

(Helping the student with diabetes succeed: A guide for school personnel, 2016)  
(School nursing: A comprehensive text, Chapter 25, Students with Diabetes, 2019)

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### Various Plans for Diabetes Management

Plan	Contents	Who Prepares It
Diabetes Medical Management Plan (DMMP)	Medical orders; all aspects of routine and emergency diabetes care	Student's personal diabetes health care team
Individualized Health Care Plan (IHP)	School nursing care plan; how diabetes care, as prescribed in the Diabetes Medical Management Plan, will be delivered in the school	School nurse
Emergency Care Plans for Hypoglycemia and Hyperglycemia	Tool for school staff; how to recognize and treat hypoglycemia or hyperglycemia and what to do in an emergency	School nurse
Section 504 Plan, other education plan, or Individualized Education Program (IEP)	Education plans; address each student's needs for services to manage their diabetes safely and effectively in school, where required under Section 504, the Americans with Disabilities Act, or the Individuals with Disabilities Education Act	504 team IEP team

(Helping the student with diabetes succeed: A guide for school personnel, 2016)

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## Results of not having a plan...



Dangerous hypoglycemic episodes at school

Poor parent confidence in school's ability to manage care for their children with diabetes

Lack of consistency in care across health care and educational settings

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## Best Practices in Diabetes Management

Diabetes management training for school personnel is essential to ensure effective school-based diabetes management.

To achieve this, three levels of training are needed.

(Helping the student with diabetes succeed: A guide for school personnel, 2016)

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## Level 1

For all staff in a school building (including secretaries, administration, itinerant staff such as OT/PT). Although most school staff will not be responsible for performing daily diabetes care tasks, he or she should have a basic understanding of diabetes and be informed on:

- diabetes basics
- what to do for blood sugar highs/ lows
- how diabetes can affect a student's ability to learn
- how to recognize an emergency

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## Level 2

For school personnel who have a daily responsibility for the student with diabetes (classroom, physical education, music, and art teachers; recess staff; lunchroom staff; bus drivers, etc.), staff should be informed on Level 1 training plus:

- how to respond in an emergency
- individual student health plans
- expanded training on diabetes equipment, impact on learning, and why accommodations are needed for diabetes
- roles and responsibilities of individual staff members (see *Actions for...*)

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## Level 3

For one or more staff members designated as trained diabetes personnel (TDP) who will perform or assist the student with diabetes care tasks in absence or in conjunction with the nurse, TDP should be informed on Level 2 training plus:

- diabetes care tasks that are student-specific (glucose monitoring, insulin administration, Glucagon, ketone testing, carbohydrate counting, etc.)
- Step-by-step instructions and training on how to perform the task using the student's equipment and supplies

See [Missouri Dept. Of Health Diabetes Toolkit on Training Staff](#) for clear parameters, documentation of training, and ongoing evaluation by school nurse

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Learn about equipment and processes that make diabetes care possible

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Priming an Insulin Pen

**Insulin**

Injections vs. pumps

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A demo as simple as our pump

The simulator™ app lets you experience the simple touchscreen interface of the t:slim X2™ insulin pump using your mobile device.

- No prescription
- No paperwork
- No glucose calls
- No obligation

COMPATIBLE DEVICES

- iPhone 5 or later
- iPad 2 or later
- Android 5.0 (Lollipop) or later
- iPad touch 5G or later

**Practice with the Tandem t simulator app**

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**Glucose Monitoring**

Fingerstick vs. continuous glucose monitors

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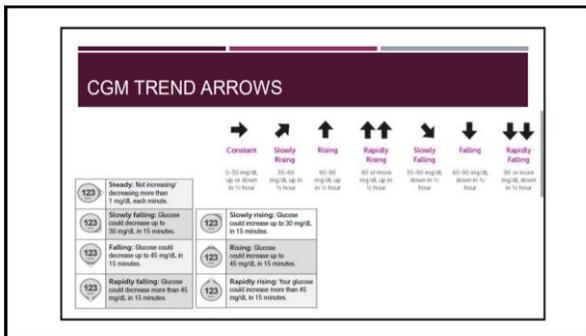
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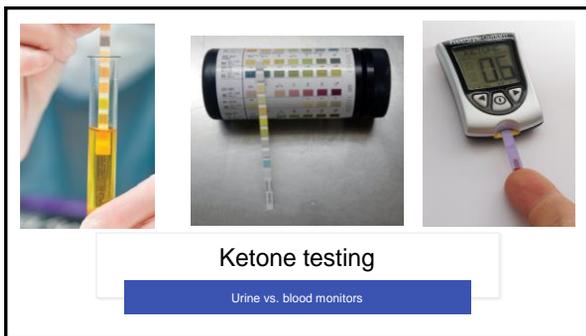
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Glucagon for Emergencies

Injection vs. nasal spray

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Carbohydrate Counting

Using the insulin-to-carb ratio

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Calculate insulin dose

- The insulin to carb ratio varies from student to student and will be specified in the doctor orders
- Written as "give 1 unit insulin per X grams of carbs"

Example: Meal eaten has 60 grams carbs. Ratio is 1:10 (give 1 unit of insulin for every 10 grams of carbs eaten)

$60/10 = 6$  units of insulin are needed to cover this meal

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## Staying Current with Diabetes

- Attend area and online seminars on diabetes
- Invite doctor/ nurse/ diabetes educator to come to school for in-service on how to work with pumps, cgm's, carb counting, and more
- Read professional journals like *The Journal of School Nursing*
- Watch online tutorials for quick problem-solving solutions when equipment or devices need attention (You Tube is great for this)
- Invite a parent of a student with diabetes to spend time with you at school going over new or unfamiliar equipment
- Consult user and owner's manuals for specific equipment questions (most can now be found online or have a toll-free phone number)
- Consult with fellow school nurses, or contact neighboring nurses in other districts if you are the only one in your district

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## Part 2: What does a new school nurse need to know *moving forward*?




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## Supporting Students



-  More than addressing basic medical orders
-  Requires on-going and long-term education of student with diabetes, parents, and staff
-  Promotes self-management for student
-  Promotes best possible outcome for student

(School nursing: A comprehensive text, Chapter 25, Students with Diabetes, 2019)

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## How To Help Students Implement Effective Diabetes Management

- Promote Any time, Any place monitoring at school
- Recognize and Treat Hypoglycemia and Hyperglycemia
- Administer Insulin and/or Other Diabetes Medication
- Plan for Disasters and Emergencies
- Promote Regular Physical Activity
- Plan for Special Events, Field Trips, and Extracurricular Activities
- Deal with Emotional and Social Issues
- Understand Why Diabetes Self-Management Is Important

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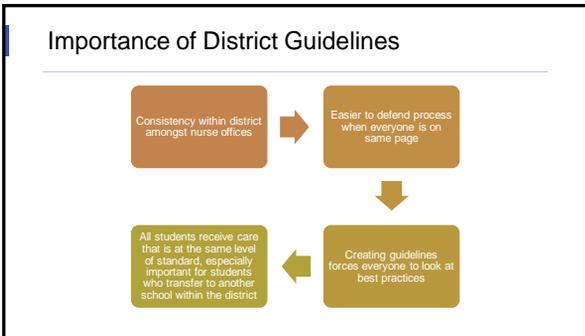
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### Locating and Using Diabetes Resources

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### National Diabetes Resources

American Diabetes Association  
<https://www.diabetes.org/resources/known-your-rights/safe-at-school-state-laws/training-resources-school-staff/diabetes-care-tasks-school>

Centers for Disease Control and Prevention (CDC)  
<https://www.cdc.gov/healthyschools/npao/diabetes.htm>

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)  
<https://www.niddk.nih.gov/health-information/diabetes>

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[Schoolwalk.diabetes.org](http://Schoolwalk.diabetes.org)

- Educational teaching materials and lessons for K-12, and you don't have to be a teacher to use!

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[beyondtype1.org](http://beyondtype1.org)

Great website for practical T1DM information. For younger kids, check out the SnailMail Club to write letters to other kids with T1DM, and for the teens check out the phone app to connect with others with T1DM, ask questions, vent, or find inspiration.



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**Juvenile Diabetes Research Foundation**

TypeOneNation: A great community forum to connect with others dealing with T1DM and a place to exchange information, answers and support  
<https://www.jdrf.org/community/typeonenation/>

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**Colorado Kids with Diabetes**

[WWW.COLORADOKIDSWITHDIABETES.ORG](http://WWW.COLORADOKIDSWITHDIABETES.ORG)

COLORADO KIDS WITH DIABETES OFFERS EXTENSIVE TOOLS FOR NURSES, TEACHERS AND PARENTS ALONG WITH NUMEROUS SAMPLE FORMS

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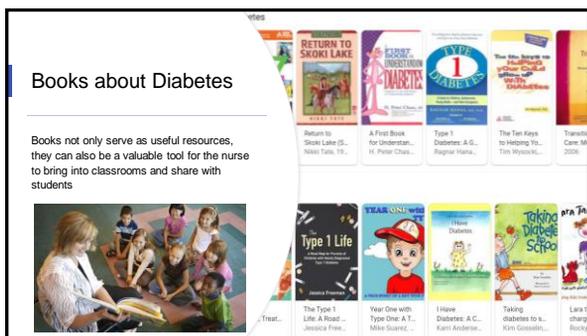
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**Books about Diabetes**

Books not only serve as useful resources, they can also be a valuable tool for the nurse to bring into classrooms and share with students



Treat...  
 The Type 1 Life: A Road...  
 Hear One with Type One: A T...  
 I Have Diabetes: A C...  
 Taking diabetes to s...  
 Let's change Books

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## Type 1 Diabetes: In-Person and Virtual Support Groups

When people get together with others who have type 1 diabetes, they can encourage each other, share ideas, talk about experiences, and find new ways to cope with this chronic health condition.



**Columbia, MO**  
Diabetes care program @ Children's Hospital  
Youth and Teen Diabetes Education and Support  
573-875-9000  
[medicine.missouri.edu](http://medicine.missouri.edu)

**Kansas City, MO**  
Children's Diabetes Center  
Youth and Teen Diabetes Education and Support  
816-960-8802  
[www.childrensmercy.org](http://www.childrensmercy.org)

**Kansas City, MO**  
Diabetes Management Program  
Youth and Teen Diabetes Education and Support  
888-670-7261  
[www.cmjpcn.org](http://www.cmjpcn.org)

**St Louis, MO**  
St Louis Diabetes Program  
Youth and Teen Diabetes Education and Support  
314-454-2350  
[www.stlouischildrens.org](http://www.stlouischildrens.org)

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## Summer Camps

- <https://www.diabetes.org/community/camp>
- <https://beyondtype1.org/diabetes-camp/>
- <https://www.diabetescamps.org/>

Camp really can be the best medicine! Kids get a traditional summer camp experience in a medically safe environment all while developing social skills, self-respect, and lifelong friendships. It helps boost their confidence and ability to care for themselves.

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## Special Challenges for Teens



Impulse vs. Planning

Control vs. Freedom

Dating, social events, and sleepovers

Competitive sports

"Diabetes Burnout"



JDRF.org has numerous online resources for teens that address driving, friendships, school, parents, and more!

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### Social Media Connects Teens with Role Models

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### College-Bound Students



- <https://collegediabetesnetwork.org/>
- Find resources here, including free booklets, that cover everything from how to plan for college, what to bring, what actions to take, how to transition to a new PCP, and how to talk to your new roommate about type 1 diabetes
- <https://diabetesscholars.org/>
- Scholarship program for students entering college
- Exit interview with the school nurse

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### Final Thoughts...



- Due to the clinical knowledge required, school nurses must take ultimate responsibility for implementing diabetes management at school
- Promote a culture of diabetes education, awareness and sensitivity within the school climate

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