

DIABETES MEDICAL MANAGEMENT PLAN (DMMP) For Student Requiring Insulin Therapy



This plan should be completed by the student's parent(s)/guardian(s) and the diabetes health care team. It should be reviewed with relevant school staff and copies should be kept in a place that can be accessed easily by the school nurse, delegated diabetes care aide, and other authorized personnel.

Date of Plan: _____ This plan is valid for school year: _____ - _____

STUDENT'S NAME: _____

Birthdate: ____/____/____ Month/Year of Diabetes Diagnosis: _____ Type 1 Type 2

SCHOOL: _____

School Phone #: _____ School FAX #: _____

School Nurse: _____ Homeroom Teacher: _____

CONTACT INFORMATION

Parent(s)/Guardian(s) Name: _____

Home Number: _____ Work: _____ Cell: _____

Email Address: _____

If different from above:

Parent(s)/Guardian(s) Name: _____

Home Number: _____ Work: _____ Cell: _____

Email Address: _____

Other Emergency Contact Name: _____ Relationship: _____

Home Number: _____ Work: _____ Cell: _____

Email Address: _____

DMMP SUMMARY OF CARE

Check blood glucose: before breakfast _____ minutes before dismissal

before lunch other: _____

Insulin: Humalog Novolog Apidra Lantus Levemir

Insulin delivery: Syringe Insulin pen Insulin pump

Dose information for Humalog / Novolog / Apidra: _____

Insulin-to-carbohydrate ratio: Breakfast: _____ Mid-morning snack: _____

Lunch: _____ Afternoon snack: _____

Blood glucose target: _____ **Correction/Insulin sensitivity factor:** _____

Correction dose sliding scale insulin: Does not apply



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Blood glucose: _____ to _____ mg/dl, give _____ units

Blood glucose: _____ to _____ mg/dl, give _____ units

Blood glucose: _____ to _____ mg/dl, give _____ units

Blood glucose: _____ to _____ mg/dl, give _____ units

Lantus / Levemir: Does not apply

Dose: _____ units Time: _____ Syringe Insulin pen

Other diabetes medications: Does not apply

Name: _____ Dose: _____ Time: _____ Route: _____

Hypoglycemia Treatment:

Mild: Give 15 grams carbohydrate in form of rapid-acting glucose product. Check blood glucose in 15 minutes. Repeat treatment if symptoms persist and/or blood glucose is less than 70 mg/dl.

Severe: Give _____ mg Glucagon intramuscularly. Place student in side lying position as nausea/vomiting may occur.

Ketones:

Check for urine ketones if blood glucose is **unexpectedly above 250 mg/dl** and/or student has **headache, stomach pain, nausea or vomiting**. If urine ketones are present, refer to pages 6 - 7 of DMMP.

PART ONE: CHECKING BLOOD GLUCOSE

Blood glucose target range: 70 – 120 mg/dl 80 – 150 mg/dl Other: _____ mg/dl

A. Check blood glucose:

Before breakfast Before lunch Before PE _____ minutes before dismissal

As needed for signs/symptoms of illness As needed for signs/symptoms of low or high blood glucose

Other: _____

Site of testing: **Fingertip** **Brand/Model** of blood glucose meter: _____



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B. Student's self-care blood glucose checking skills:

- Requires school nurse/diabetes care aide to check blood glucose and record date, time and blood glucose results
- May check blood glucose with supervision; requires school nurse/diabetes care aide to **observe and record from the meter** date, time and blood glucose meter results
- Independently checks blood glucose

C. Continuous Glucose Monitor (CGM): Does not apply

Brand/Model: _____ **Alarms** set for: low high

Charlotte Lab School does not replace finger stick blood glucose values. Finger stick blood glucose is required prior to any treatment adjustment.

PART TWO: HYPOGLYCEMIA (LOW BLOOD GLUCOSE)

A. Mild to Moderate Hypoglycemia

Student's usual symptoms:

- shakiness
- dizziness
- sweating
- irritability
- extreme hunger
- headache
- pale skin color
- confusion
- behavioral changes, moodiness
- other: _____

Treatment:

If student is exhibiting **symptoms** of hypoglycemia, **OR** if blood glucose level is **less than 70 mg/dl**, give a quick-acting glucose product equal to **15 grams** of carbohydrate.

Recheck blood glucose in **15 minutes** and repeat treatment if blood glucose level is **less than 70 mg/dl** and/or symptoms of hypoglycemia persist.

Examples of quick-acting glucose products: *glucose tablets, icing gel, granulated sugar, fruit juice, regular soda, Skittles®, Smarties®*

B. Severe Hypoglycemia

Symptoms: unable to eat or drink unconscious/ unresponsive seizure activity/convulsions



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Treatment: Give **Glucagon** injection intramuscularly (IM)

Dose: ½ mg dose (Student weighs less than 45 pounds)

1 mg dose (Student weighs 45 pounds or more)

Site for glucagon injection: thigh buttocks

Place student lying on his/her side as vomiting may occur.

Contact: 9-1-1 (Emergency Medical Services) Parent/guardian

PART THREE: HYPERGLYCEMIA (HIGH BLOOD GLUCOSE)

A. Student's usual symptoms:

fatigue headache increased thirst frequent urination

other: _____

- Push carbohydrate-free fluids. Water is preferred.
- Give correction dose of rapid-acting insulin.
- Allow bathroom privileges as needed.
- **Check for urine ketones** if blood glucose is **unexpectedly above 250 mg/dl**.
- **Check for urine ketones** if student complains of **headache, stomach pain, nausea, or vomiting** regardless of blood glucose results.

PART FOUR: DIABETIC KETOACIDOSIS (DKA) PREVENTION

Check for ketones if student has one or more of the following:

Nausea Vomiting Headache "Feels sick" Stomach pain
Unexpected blood glucose above 250 mg/dl

Treatment:

A. If urine ketones are present:

- **Push fluids:** 8 ounces **water** every 30 – 60 minutes.
- Allow bathroom privileges as needed.
- **Check blood glucose** and **urine ketones** every **TWO** hours.
- **Give correction dose** every **TWO** hours if blood glucose is above target.
- **If student is using an insulin pump, also do the following:**
 - Give **ALL** insulin doses using **syringe/insulin pen**. **Do NOT use the insulin pump.**
 - Change pump site and infusion set.
 - Troubleshoot insulin pump.
- **Contact** parent(s)/guardian(s).

B. When MODERATE TO LARGE ketones are present:

- Follow the instructions above **and do the following:**
If blood glucose is **less than 150 mg/dl**, give a carbohydrate containing beverage **without** insulin until blood glucose rises above 150 mg/dl. Then switch to water.



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Avoid physical activity.

Give correction dose if blood glucose is above target **plus “EXTRA INSULIN” dose every TWO hours** according to the chart below. (Add correction dose and “extra insulin” dose together and give one injection.)

“EXTRA INSULIN” DOSES

(For use with rapid-acting insulin: Humalog, Novolog, Apidra)

Student’s Age	Extra Insulin
0 – 5 years of age	1 – 2 units
6 – 10 years of age	2 – 4 units
11 – 15 years of age	4 – 6 units
16 years of age and older	6 – 10 units

- **Call 9-1-1 (Emergency Medical Services)** if student has any of the following symptoms:

EMERGENCY SYMPTOMS			
<i>chest pain</i>	<i>shortness of breath</i>	<i>heavy breathing</i>	<i>deceased level of consciousness</i>

- Contact healthcare provider if uncertain of treatment plan for urine ketones.

PART FIVE: MEAL PLANNING

Variable meal plan: Carbohydrates eaten at meals/snacks **can vary**

Breakfast and/or lunch: **No carbohydrate restrictions**

Mid-morning snack:	<input type="checkbox"/> Does not apply	Afternoon snack:	<input type="checkbox"/> Does not apply
	<input type="checkbox"/> Do not give snack		<input type="checkbox"/> Do not give snack
	<input type="checkbox"/> Keep carbohydrates less than 10 gms		<input type="checkbox"/> Keep carbohydrates less than 10 gms
	<input type="checkbox"/> No carbohydrate restriction		<input type="checkbox"/> No carbohydrate restriction
	<input type="checkbox"/> Other: _____		<input type="checkbox"/> Other: _____

OR **Fixed Meal Plan:** **Carbohydrates at meals/snacks are to be a specific amount**

Meal/Snack	Time	Total Carbohydrates (gms)
Breakfast	_____	_____
Mid-morning snack	_____	_____
Lunch	_____	_____
Afternoon snack	_____	_____



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Student's self-care carbohydrate counting skills: Yes No
 Requires school nurse/diabetes care aide to count carbohydrates in foods/drinks Yes No
 May count carbohydrates with supervision Yes No Independently counts carbohydrates

PART SIX: INSULIN THERAPY

Preferred rapid-acting insulin: Humalog Novolog Apidra

Insulin delivery device: syringe/ insulin pen insulin pump

Time of Insulin Delivery	Insulin Dose Coverage
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Breakfast Does not apply

<input type="checkbox"/> before eating <input type="checkbox"/> within _____ minutes of start of meal <input type="checkbox"/> other: _____ _____	<input type="checkbox"/> Dose for carbohydrate coverage only <input type="checkbox"/> Dose for carbohydrate coverage plus correction when blood glucose is greater than _____ mg/dl and it has been _____ hours since last insulin dose
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Mid-morning Snack **Does not apply**

<input type="checkbox"/> before eating <input type="checkbox"/> within _____ minutes of start of snack <input type="checkbox"/> other: _____ _____	<input type="checkbox"/> Only dose for carbohydrate coverage if snack is greater than _____ grams <input type="checkbox"/> Dose for carbohydrate coverage plus correction when blood glucose is greater than _____ and it has been _____ hours since last insulin dose
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Lunch **Does not apply**

<input type="checkbox"/> before eating <input type="checkbox"/> within minutes _____ of start of meal <input type="checkbox"/> other: _____ _____ _____	<input type="checkbox"/> Dose for carbohydrate coverage only <input type="checkbox"/> Dose for carbohydrate coverage plus correction when blood glucose is greater than _____ mg/dl and it has been hours _____ since last insulin dose
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Afternoon Snack Does not apply

<input type="checkbox"/> before eating <input type="checkbox"/> within minutes _____ of start of meal <input type="checkbox"/> other: _____ _____ _____	<input type="checkbox"/> Dose for carbohydrate coverage only <input type="checkbox"/> Dose for carbohydrate coverage plus correction when blood glucose is greater than _____ mg/dl and it has been hours _____ since last insulin dose
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Student's self-care insulin administration skills:

- Yes No Requires school nurse/diabetes care aide to calculate dose, draw up insulin, and/or give injection/bolus
- Yes No May give own injections; requires school nurse/diabetes care aide to calculate dose and/or draw up insulin
- Yes No May calculate dose, draw up insulin and/or give own injections/bolus with supervision
- Yes No Independently calculates dose, draws up insulin and/or gives injection/bolus
- Yes No Refer to: *Additional Information for Student with Insulin Pump*

Parent's Authorization to Adjust Insulin Dose:

- Yes No Parent(s)/guardian(s) can make adjustments to insulin-to-carbohydrate ratio or fixed meal/snack dose as needed
- Yes No Parent(s)/guardian(s) can make adjustments to correction factor or fixed correction dose as needed

Determining Insulin Dose:

I. For Adjustable Insulin Therapy Does not apply

A. Calculating insulin dose for carbohydrate coverage (Food dose) - Insulin-to-carbohydrate ratio:

Breakfast: 1 unit of insulin per _____ grams of carbohydrate
 Mid-morning snack: 1 unit of insulin per _____ grams of carbohydrate
 Lunch: 1 unit of insulin per _____ grams of carbohydrate
 Afternoon snack: 1 unit of insulin per _____ grams of carbohydrate

Equation for insulin dose calculation for carbohydrate coverage:

$\frac{\text{Grams of carbohydrate in meal/snack}}{\text{Insulin-to-carbohydrate ratio}} = \text{units of insulin}$

Refer to: *Calculating Insulin Dose: An Example for Variable Carbohydrate and Insulin Therapy*

Determining insulin dose for hyperglycemia (Correction dose)

1) Calculating insulin correction dose:

Blood glucose correction factor (Insulin Sensitivity factor): _____
 Target blood glucose: _____ mg/dl



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Equation for insulin correction dose:

$$\frac{\text{Actual blood glucose} - \text{Target blood glucose}}{\text{Blood glucose correction factor}} = \text{units of insulin}$$

Refer to: *Calculating Insulin Dose: An Example for Variable Carbohydrate and Insulin Therapy*

OR

2) Correction dose sliding scale insulin:

Blood glucose _____ to _____ mg/dl, give _____ units

Blood glucose _____ to _____ mg/dl, give _____ units

Blood glucose _____ to _____ mg/dl, give _____ units

Blood glucose _____ to _____ mg/dl, give _____ units

C. Total insulin dose

Equation for total insulin dose:

$$\text{Food dose} + \text{Correction dose} = \text{Total insulin dose (units)}$$

Refer to: *Calculating Insulin Dose: An Example for Variable Carbohydrate and Insulin Therapy*

If using **injection therapy**, round total dose to **nearest**:

1/2 unit dose

whole unit dose

II. For Long-acting Insulin Therapy:

Does not apply

Insulin: Lantus Levemir

Dose: _____ units

Delivery Time: _____

PART SEVEN: OTHER DIABETES MEDICATIONS Does not apply

Medication Name: _____

Dose: _____

Delivery Route: _____

Delivery Time: _____

Student's self-care medication skills:

Yes No Requires school nurse/diabetes care aide to observe student taking correct medication and dose; record results

Yes No Independently takes medication

PART EIGHT: SPECIAL EVENTS OR ACTIVITIES

• **Diabetes supplies must be readily available** during regular school hours and special events/activities such as field trips, class parties, dances, etc.



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Diabetes Supplies

_____ quick-acting glucose product _____ glucagon insulin _____ blood glucose meter test strips
 _____ lancing device _____ water _____ ketone strips lancets _____ batteries

insulin delivery device supplies: syringes/needle insulin pens/pen needles insulin pump/PDM

extra pump supplies (if applicable): infusion sets/pods insertion device alcohol wipes
 tubing cartridges/reservoirs

If student is physically active, refer to Physical Activity, part 9

If student uses insulin pump therapy, refer to *Additional Information for Student with Insulin Pump, part 10.*

Parent(s)/guardian(s) and school nurse/diabetes care aide or designated school personnel must discuss and establish **prior to** the event the student’s diabetes care plan during special events/activity. Care plan should include instruction regarding meal/snacks, blood glucose monitoring, and insulin therapy. The following portion of the DMMP is to be completed after the discussion.

Event: _____

Meals/snacks:

Blood glucose monitoring:

Insulin therapy:

Other: _____

PART NINE: PHYSICAL ACTIVITY

- **Avoid physical activity when urine ketones are moderate to large.**
- **Diabetes supplies must be readily available** when student is physically active.
- If student uses insulin pump therapy, refer to *Additional Information for Student with Insulin Pump, part 10.*



DIABETES MEDICAL MANAGEMENT PLAN (DMMP) For Student Requiring Insulin Therapy



A. Physical education class (PE)

If blood glucose is checked at time of PE: Does not apply

Student may participate in PE when blood glucose is greater than _____ mg/dl. If blood glucose is greater than 70 m/dl but less than _____ mg/dl, give _____ grams of rapid-acting glucose product before student participates in physical activity.

B. Physical activity associated with extra-curricular events/activities

<i>Examples of Extra-curricular Events/Activities</i>	<i>team sports</i>	<i>cheerleading</i>	<i>marching band</i>	<i>drama</i>
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Parent(s) / guardian(s) and school nurse / diabetes care aide or designated school personnel must discuss and establish prior to the extra-curricular event/activity the student's diabetes care plan. Care plan should include instruction regarding meal/snacks, blood glucose monitoring, and insulin therapy. The following portion of the DMMP is to be completed after the discussion.

Event: _____

Meals/snacks:

Blood glucose monitoring:

Insulin therapy:

Other: _____

PART TEN: ADDITIONAL INFORMATION FOR STUDENT WITH INSULIN PUMP

Brand/Model of pump: _____

Type of infusion set: _____

A. Student's self-care pump skills:

Independent?

- Enter carbohydrate grams into pump
- Bolus correct amount for carbohydrates consumed
- Enter blood glucose into pump
- Administer correction bolus
- Set temporary basal rate
- Change batteries
- Disconnect and reconnect pump to infusion set
- Prepare: reservoir, cartridge, and tubing
- Insulin pod
- Insert: new infusion set new pod
- Troubleshoot alarms and malfunctions

- | | | |
|------------------------------|-----------------------------|------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | |



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B. Physical activity and insulin pump

- May stay connected to insulin pump using regular basal rate during physical activity.
- May stay connected to insulin pump during physical activity using temporary basal rate of % for hours.
- May disconnect from pump during physical activity; must check blood glucose **every hour** while disconnected.

C. If student has urine ketones:

- **Avoid physical activity if moderate to large urine ketones are present.**
- **Always** consider insulin delivery problems: pump failure or malfunction, infusion set problems, and infusion site failure. If in doubt, change pump site and infusion set, plus troubleshoot pump.
- **Give insulin doses using syringe/insulin pen.** • Refer to *Part Four: Diabetic Ketoacidosis (DKA) Prevention*.

PART ELEVEN: SCHOOL DISASTER PLAN/LOCK DOWN

- Parent/guardian should provide school with diabetes supplies for use during a disaster or emergency prior to the event.
- Follow instructions as specified in this Diabetes Medical Management Plan
- Student should have access to all diabetes supplies.

PART TWELVE: SIGNATURES/CONSENT

This Diabetes Medical Management Plan has been approved by:

Date: _____

Student's Diabetes Health Care Provider

I, (parent/guardian:) (1) _____ (2)

_____ give permission to the school nurse/diabetes care aide at Charlotte Lab School to perform and carry out the diabetes care tasks as outlined in (student name):

_____ 's Diabetes Medical Management Plan.

I also consent to the release of the information contained in this Diabetes Medical Management Plan to all school staff members and other adults who have responsibility for my child and who may need to know this information to maintain my child's health and safety.

Initials: (1) _____ (2) _____

I give permission to the school nurse/diabetes care aide to contact my child's Diabetes Health Care Provider.

Initials: (1) _____ (2) _____



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I agree to provide the school nurse/diabetes care aide with all diabetes supplies necessary for my child's care.

Initials: (1) _____ (2) _____

I agree to inform the school nurse/diabetes care aide of changes made in my child's diabetes care as recommended by my child's diabetes health care provider.

Initials: (1) _____ (2) _____

Acknowledged and received by:

(1) _____
Student's Parent/Guardian

Date: _____

(2) _____
Student's Parent/Guardian

Date: _____

School Nurse/Delegated Diabetes Care Aide

Date: _____

School Nurse/Delegated Diabetes Care Aide

Date: _____

