## Instructions for Calculating Insulin Dose When Moderate to Large Urine Ketones are Present

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

Obtain the following information:

Insulin-to-carbohydrate ratio: 1 unit/\_\_\_\_ grams Correction factor/insulin sensitivity factor: 1 unit/\_\_\_\_ Blood glucose target: 70 - \_\_\_\_ mg/dL Urine ketones: 
□ moderate 
□ large

Check blood glucose. Blood glucose reading: \_\_\_\_\_ mg/dL

**If blood glucose is less than 150 mg/dL,** eat/drink 15 grams of carbohydrates. Do not give insulin for these carbohydrates. Recheck blood glucose in 15 minutes. Repeat treatment until blood glucose is greater than 150 mg/dL.

If blood glucose is greater than 150 mg/dL, proceed to Step 1.

Calculate insulin dose as follows:

**Step1→** Calculate correction insulin dose.

(blood glucose =	(blood glucose ÷	(correction factor/ =	units (correction insulin
reading)	target)	sensitivity factor)	dose)

**Step 2→** Calculate ketone insulin dose.

If moderate ketones present, calculate as follows: \_\_\_\_\_ (correction insulin dose) x 1.5 = \_\_\_\_\_ units (treatment insulin dose)

If large ketones present, calculate as follows:

\_\_\_\_\_ (correction insulin dose) x 2.0 = \_\_\_\_\_ units (treatment insulin dose)

Step 3→ Calculate food insulin dose if carbohydrates are eaten. If no carbohydrates are eaten/drank, skip this step.

Food	Amount	Carbohydrate (grams)
		Total carb:

(total carb) ÷	(insulin-to-carb ratio) =	units (food insulin dose)
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**Step 4→** Calculate total insulin dose needed to treat urine ketones.

\_\_\_\_\_ (treatment insulin dose) + \_\_\_\_\_ (food insulin dose) = \_\_\_\_\_ total units insulin to be given
using syringe or insulin pen

Round total insulin dose to nearest half unit.

If on insulin pump, give insulin by syringe/pen and change pump site.

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