INSULIN CALCULATION INSTRUCTIONS

DEFINITIONS:

**Goal Blood Sugar:** = Target blood sugar (mg/dl)

**Correction Factor:** = 1 unit of insulin for every ____ mg/dl (points) that the blood sugar is above or below _____ (Target Blood Sugar).

**Insulin to Carbohydrate Ratio:** = 1 unit of insulin for every ____ grams of carbohydrates eaten

1. **TO CALCULATE INSULIN FOR CORRECTION FACTOR:**

   Use the following formula:
   
   \[
   \text{Blood sugar value, minus Goal Blood Sugar = ______, divided by Correction Factor.}
   \]

   The result is the # of units of insulin for blood sugar correction.  *This can be a NEGATIVE number!

2. **TO CALCULATE INSULIN FOR FOOD:** (insulin to carbohydrate ratio)

   a. Determine total number of grams of carbohydrates eaten.
   b. Use doctor’s order for Carbohydrate ratio: 1 unit of insulin for every ______ gm of carbohydrate eaten.
   c. Use the following formula:
      
      \[
      \text{Divide # of grams of carbohydrates eaten by carbohydrate ratio.}
      \]

   The result is the # of units of insulin needed for food.

3. **TO CALCULATE TOTAL UNITS OF INSULIN**

   \[
   \text{# of units insulin needed for food} + \text{# of units insulin needed for Blood Sugar} \quad (*This can be a negative number.)
   \]

   \[
   \text{Total # of units of insulin}
   \]

   *If the # of units of insulin needed for blood sugar is negative, then the TOTAL # of units of insulin will be SMALLER than the # of units of insulin needed for food.

EXAMPLES:

Blood sugar goal: ___150___ mg/dl
Correction factor or Insulin Sensitivity: ___100___
Carbohydrate ratio: ___1:20___

1. Blood sugar is 220 and 40 gm of carbs are eaten.

   \[
   \begin{align*}
   220 - 150 &= 70 + 100 = .7 \text{ units} \\
   40 \text{ gm of carbs} \div 20 &= 2 \text{ units} \\
   .7 + 2 &= 2.7 \text{ units} \\
   \text{Round up to 3 units total insulin needed}
   \end{align*}
   \]

2. Blood sugar is 129 and 60 gms of carbs are eaten.

   \[
   \begin{align*}
   129 - 150 &= -21 \div 100 = -.21 \text{ units} \\
   60 \text{ gm of carbs} \div 20 &= 3 \text{ units} \\
   -.21 + 3 &= 2.79 \text{ units} \\
   \text{Round up to 3 units total insulin needed}
   \end{align*}
   \]

Adopted from Leon County School Board 6/04