

SLIDING SCALES FOR INSULIN

An "insulin sliding scale" (also called an "insulin algorithm") simply means that the amount of short- or rapid-acting insulin (Regular, Toronto, Humalog®, NovoRapid® or Apidra®) taken before a meal is adjusted according to the blood sugar at that time. Less insulin is taken when the blood sugar is low, and more is taken when the blood sugar is high. This allows for rapid normalization of high and low blood sugars. The amount of insulin taken depends on the age and weight of the child, the length of time s/he has had diabetes, and the child's sensitivity to short-acting insulin. If desired, the meal plan can also be changed by the dietitian to deal with low and high blood sugars. Your child's diabetes team can develop a sliding scale to suit your child's routine if appropriate.

Below are **two examples** of an insulin sliding scale. The first is for a younger child, and the second is for an older child. See also our handout *Insulin Sliding Scale Form*.

LITTLE KID		
<p>For example, Johnny usually takes 12 NPH/6 Regular before breakfast and 5 NPH/2 Regular before dinner. This sliding scale assumes that 1 unit of Regular will lower the blood sugar by about 8 mmol/L*.</p>		
BLOOD SUGAR	MORNING FAST-ACTING	EVENING FAST-ACTING
less than 4	decrease by $\frac{1}{2}$ R (i.e. $5\frac{1}{2}$ R)	decrease by $\frac{1}{2}$ R (i.e. $1\frac{1}{2}$ R)
4-8	same (i.e. 6 R)	same (i.e. 2 R)
8-12	add $\frac{1}{2}$ R (i.e. $6\frac{1}{2}$ R)	add $\frac{1}{2}$ R (i.e. $2\frac{1}{2}$ R)
12-16	add 1 R (i.e. 7 R)	add 1 R (i.e. 3 R)
16-20	add $1\frac{1}{2}$ R (i.e. $7\frac{1}{2}$ R)	add $1\frac{1}{2}$ R (i.e. $3\frac{1}{2}$ R)
over 20	add 2 R (i.e. 8 R)	add 2 R (i.e. 4 R)

BIG KID		
<p>For example, Suzie usually takes 25 NPH/13 Humalog before breakfast and 12 NPH/6 Humalog before dinner. This sliding scale assumes that 1 unit of Humalog will lower the blood sugar by about 4 mmol/L*.</p>		
BLOOD SUGAR	MORNING FAST-ACTING	EVENING FAST-ACTING
less than 4	decrease by 1 H (i.e. 12 H)	decrease by 1 H (i.e. 5 H)
4-8	same H (i.e. 13 H)	same H (i.e. 6 H)
8-12	add 1 H (i.e. 14 H)	add 1 H (i.e. 7 H)
12-16	add 2 H (i.e. 15 H)	add 2 H (i.e. 8 H)
16-20	add 3 H (i.e. 16 H)	add 3 H (i.e. 9 H)
over 20	add 4 H (i.e. 17 H)	add 4 H (i.e. 10 H)

*The amount of insulin needed to decrease the blood sugar is different for each child.