Insulins

Learning insulins for exams is a nightmare. Everything makes sense if **trade names** are used. I'm going to let YOU learn how to recall generics, because it's easier using what we use in real life and I want you remembering the medicine first. It's imperative to learn the difference between their **peak onset** and how long **they last**. All insulins require **SubQ injections**. Some hints to help get started. 1) **L** drugs (**L**antus and **L**evemir) are **Long acting** and all equivocal (except for how good the meal is at the drug rep dinner). 2) **Log** math is more advanced than drawing a **Lin**e, so **Log** drugs (Huma**log** Novo**log**) are used in more complex ways (qAc) versus the 3) **Lin** drugs (Humu**Lin** Novo**Lin**), which as we'll see are ancient, not great, and useful for those who don't want to think. Finally, 4) **NPH** is the **rapid** part of the log combos, while 5) **regular** insulin is a longer acting (medium) insulin.

Insulin Regimen

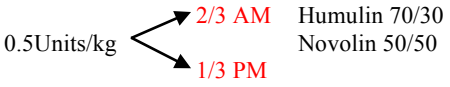
The goal of insulin regimens is to control the blood glucose as though it were a normal pancreas. That means **post prandial glucose spikes** are met by **insulin spikes post-prandially**. There is also a certain level of insulin always floating around in the body – it's called **basal insulin**. So to simulate a normal pancreas the **basal-bolus** is **best**. Insulin demand can be approximated by **0.5 Units/kilogram** the total amount per day. In the basal bolus method, ½ is in the **night time** as **Long Acting Insulin** (the basal). The other ½ is divided **qAC** of **short acting** insulin (the bolus). It's important to remember that a blood sugar is affected by the **insulin that precedes it**. If the **AM Dose** is high, increase the nighttime dose. If the bG taken near lunch is high, increase the breakfast dose.

A lot of people try the **Idiot Insulin** method. It's called (I call it) idiot insulin because the **same amount** of **medium acting insulin** is given regardless of the blood sugar. If patients don't want to check bG or are afraid of needles, they can use this method. It has **poor basal coverage** and **poor post prandial coverage**, but it's only biD dosing.

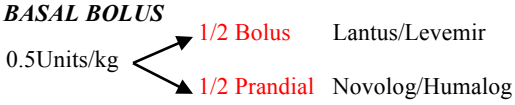
The **worst** method is **sliding scale insulin** where **no basal insulin** is given. Rather, a certain amount of **short-acting insulin** is given with each accucheck. **Bad hospitalists** will do this. Since current bG is a product of the last insulin it will create **hyperglycemic peaks** and **hypoglycemic troughs** as the nurse tries to chase down the bG on your orders. If following another regimen and sugars are still high, adjustment of daily doses is appropriate. However, if the patient eats a **cake** or has **ridiculous bG** one time, using the sliding scale is a great supplement - but only **on top of** an existing regimen.

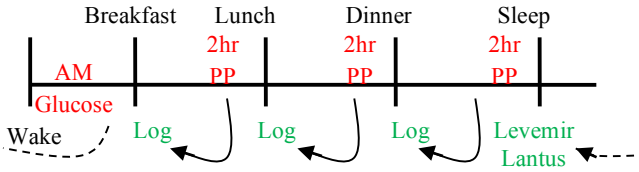
Drug	*Class*	*Use*	*When*
Lantus **L**evemir	**L**ong Acting Insulin	**Basal insulin**	qPM
Huma**Log** Novo**Log**	**Rapid** acting Insulin Combo	**Prandial Insulin**	qAC
Humu**Lin** Novo**Lin**	**Medium** acting Insulin Combo (old school, easy)	**Idiot Insulin**	biD
NPH	Rapid Acting	Prandial	qAC
Regular	Rapid Acting	Generally useless	

IDIOT INSULIN

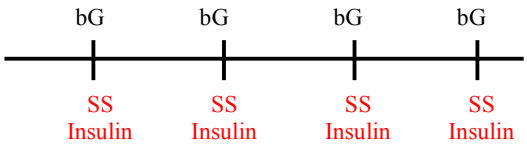


BASAL BOLUS





CHASING THE SUGAR ***(DON'T EVER DO THIS)***



Effect	*Findings*
Somogyi Effect	Too MUCH insulin at night → High AM bG
Dawn Phenomena	Too LITTLE insulin at night → High AM bG
Check early AM bG to tell the difference	

Complications	*What we do*
CAD or HF	**ACE-i**
Nephropathy	Microalbumin Screen, **ACE-i**
Peripheral Neuropathy	Foot care, education, **educations**
Eyes	Fundoscopic Exams, **Laser**
Erectile Dysfunction	Nighttime Tumescence, **Viagra**
Control the Blood Sugars is paramount	