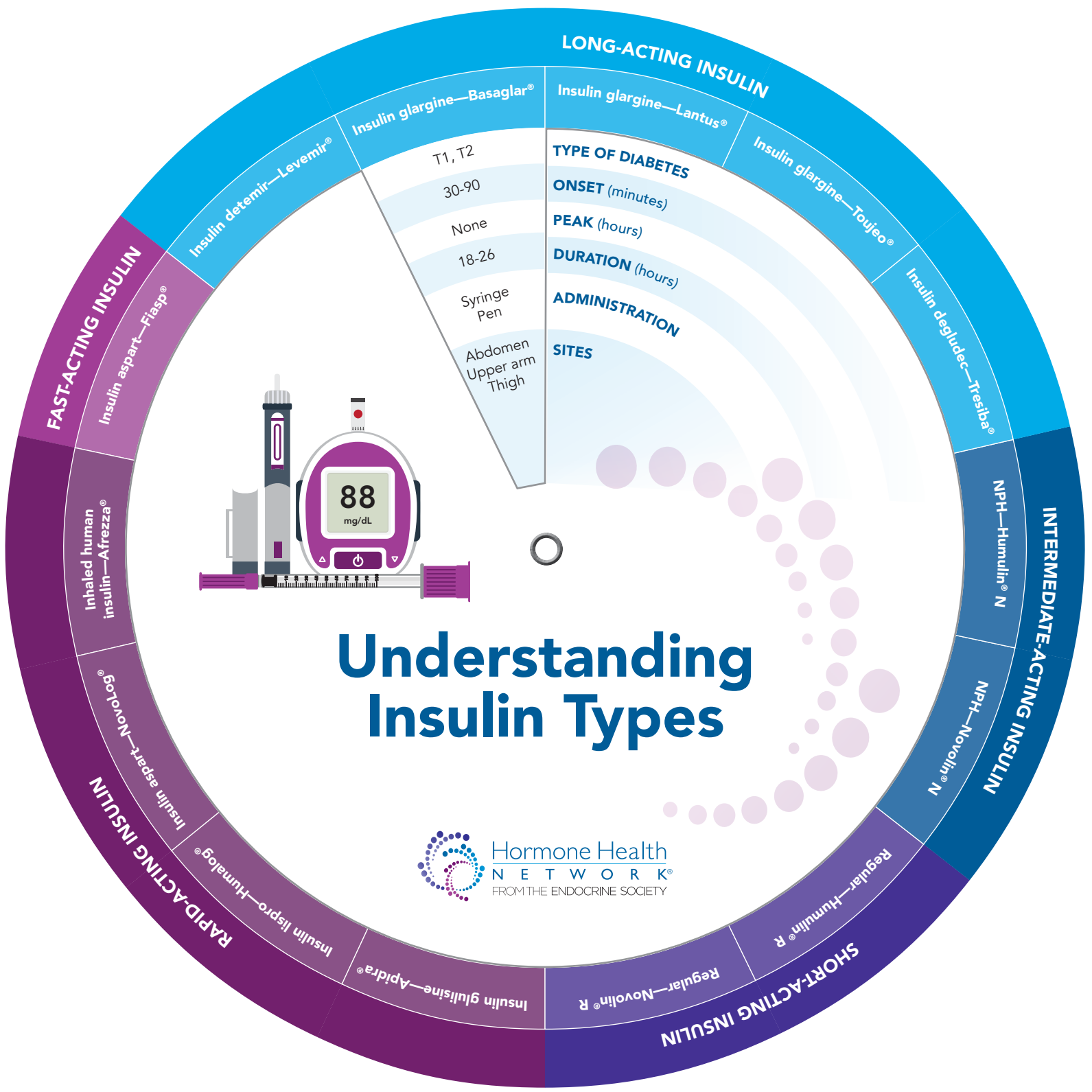
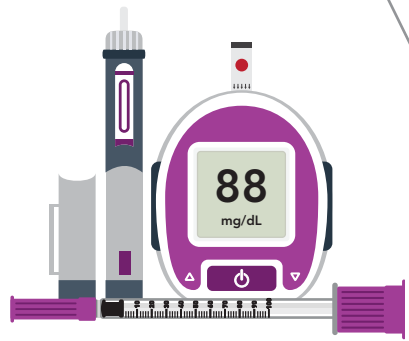


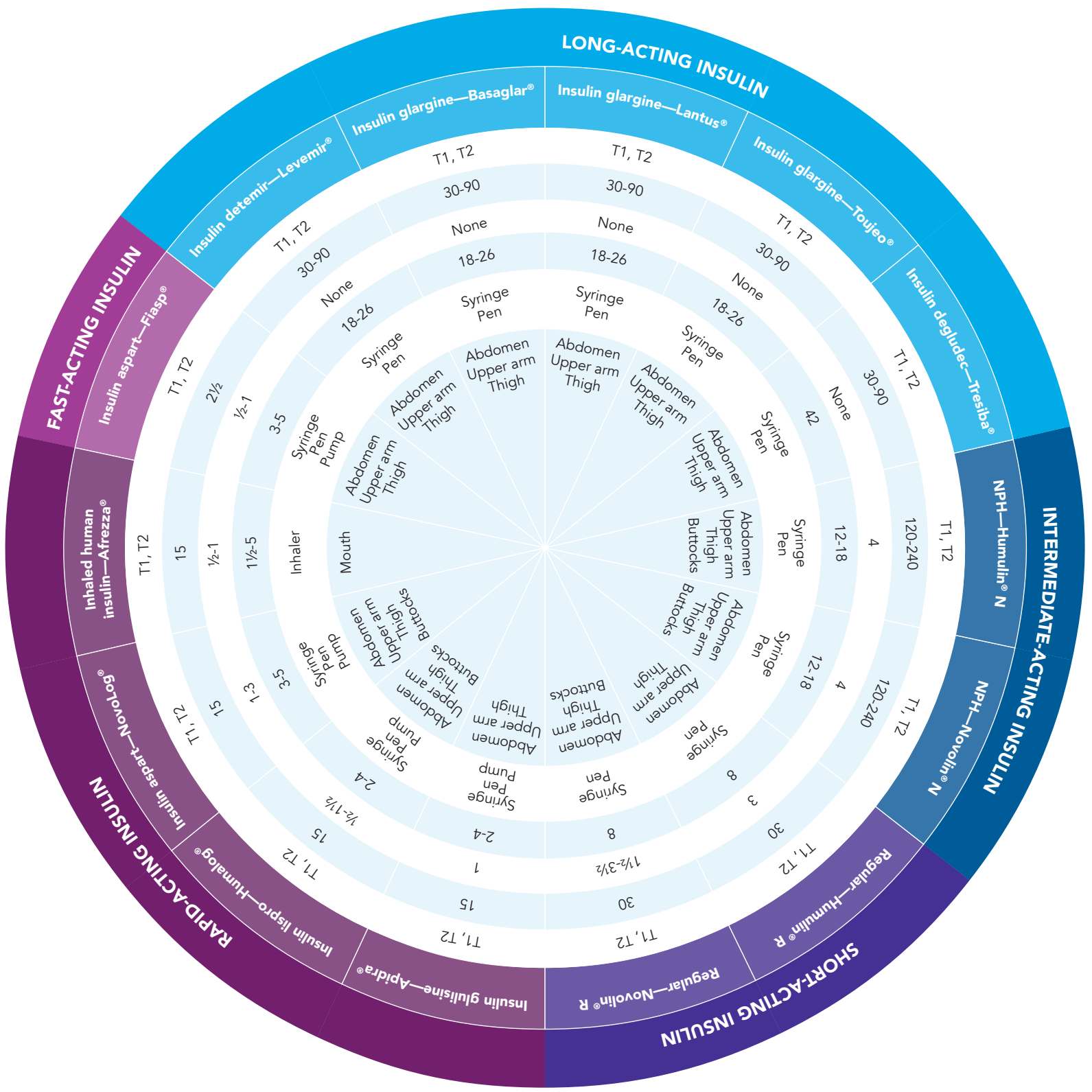
# Understanding Insulin Types





- TYPE OF DIABETES
- ONSET (minutes)
- PEAK (hours)
- DURATION (hours)
- ADMINISTRATION
- SITES

# Understanding Insulin Types



### SHORT-ACTING INSULIN

Regular—Novolin® R	Regular—Humulin® R
Onset: 30 min, Duration: 3-5 hours	Onset: 30 min, Duration: 3-5 hours
Injection Sites: Abdomen, Upper arm, Thigh, Buttocks	Injection Sites: Abdomen, Upper arm, Thigh, Buttocks

### INTERMEDIATE-ACTING INSULIN

NPH—Novolin® N	NPH—Humulin® N
Onset: 1-2 hours, Duration: 12-18 hours	Onset: 1-2 hours, Duration: 12-18 hours
Injection Sites: Abdomen, Upper arm, Thigh, Buttocks	Injection Sites: Abdomen, Upper arm, Thigh, Buttocks

### LONG-ACTING INSULIN

Insulin glargine—Lantus®	Insulin glargine—Toujeo®	Insulin degludec—Tresiba®
Onset: 30-90 min, Duration: 24 hours	Onset: 30-90 min, Duration: 24 hours	Onset: 30-90 min, Duration: 36-42 hours
Injection Sites: Abdomen, Upper arm, Thigh	Injection Sites: Abdomen, Upper arm, Thigh	Injection Sites: Abdomen, Upper arm, Thigh

### RAPID-ACTING INSULIN

Insulin lispro—Humalog®	Insulin aspart—Novolog®
Onset: 15 min, Duration: 3-5 hours	Onset: 15 min, Duration: 3-5 hours
Injection Sites: Abdomen, Upper arm, Thigh, Buttocks	Injection Sites: Abdomen, Upper arm, Thigh, Buttocks

### FAST-ACTING INSULIN

Insulin aspart—Fiasp®	Inhaled human insulin—Afrezza®
Onset: 20 min, Duration: 3-5 hours	Onset: 15 min, Duration: 3-5 hours
Injection Sites: Abdomen, Upper arm, Thigh	Injection Site: Mouth

## UNDERSTANDING INSULIN TYPES

Many types of insulin are available and differ in how quickly each starts to work and how long each lasts. Rapid-acting, fast-acting, and short-acting insulins are mealtime insulins. This means they are used before eating a meal and to correct elevated blood sugars. Intermediate-acting and long-acting insulins are basal insulins. This means that they control your blood sugar levels between meals and throughout the night.

**Fast-acting** . . . . . Begins to work in just a few minutes after injection and lasts only several hours

**Rapid-acting** . . . . . Begins to work in about 15 minutes after injection and lasts only several hours

**Short-acting** . . . . . Begins to work in about ½ hour after injection and lasts only several hours

**Intermediate-acting** . . . . . Begins to work in about 2 to 4 hours and lasts up to 18 hours

**Long-acting** . . . . . Begins to work within 90 minutes and lasts for about a day or more

## MY INSULIN SCHEDULE

My target blood sugar range			
My basal insulin	Type:	Dose:	When:
My mealtime insulin	Type:	Dose:	When:
Insulin to carb ratio	# units insulin:	# grams carbohydrates:	
Correction factor	Correction dose: $\frac{\text{Current BS} - \text{Target BS}}{\text{Correction factor}}$		

## COMMON INSULIN REACTIONS

- **Hypoglycemia (low blood sugar):** shaky, sweaty, hungry, sleepy, dizzy, irritable, anxious
- **Allergic reaction:** rash, hives, wheezing
- **Skin changes:** redness, swelling, lump, pain, or thickening at injection site
- **Low blood potassium levels:** weakness, tiredness, muscle cramps, irregular heartbeat

Editorial review by: Elizabeth Stephens, MD - Providence Portland Medical Center;  
Ramon E. Martinez, MD - Miami Beach Community Health Center