

Memorandum

TO: Diabetes Care and Education Dietetic Practice Group (DCE DPG) members

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TOPIC: Reproduction of the education handout *Mealtime Insulin Management*.

The educational handout *Mealtime Insulin Management* was developed by the Diabetes Care and Education (DCE) Dietetic Practice Group (DPG) and authored by Kathleen Stanley, CDE, RD, LD, MSED, BC-ADM, a registered dietitian who is a member of the DCE DPG of the American Dietetic Association. Funding provided by BD. Funding company has had no influence on the content of this educational handout. For more information contact the American Dietetic Association at www.eatright.org. This handout may be reproduced for educational purposes only through 2012 with credit granted to DCE. Reproduction for sales purposes is not authorized. Please check the DCE Web site at www.dce.org or contact the DCE publications chair for the status of this educational handout after the expiration date.

Mealtime insulin management

What is mealtime insulin?

Insulin keeps blood glucose in balance. If blood glucose levels are too high, two types of insulin may be used to improve blood glucose: **long-acting** and **rapid-acting**. **Long-acting** insulin helps control blood glucose throughout the day, while **rapid-acting** insulin manages levels at meal time.

Over time, if you take oral diabetes medications, or are on a once-a-day insulin schedule, such as LANTUS® or Levemir®, you may notice higher blood glucose levels after meals, or your blood work may show increased A1C values. To help you better control your diabetes, providers may add a dose of mealtime insulin to your treatment plan, taken at breakfast, lunch and dinner.

Are there different types of mealtime insulin?

If your health care provider adds mealtime insulin to your treatment plan, keep in mind there are several types to choose from. Each is unique, so work with your provider and registered dietitian to determine which kind is right for you.

- **Rapid-acting insulin, such as NovoLog®, Humalog® and Apidra®:**
 - ◇ Take just before eating, or up to 15 minutes after your first bite of food
 - ◇ Works quickly; injections must be synchronized with meal time
- **Regular insulin, like Humulin® R and Novolin® R:**
 - ◇ Take about 30 minutes before eating
 - ◇ Works slower than rapid-acting insulin, but also lasts longer
- **Pre-mixed insulin, including Humulin® 70/30, Novolog® Mix 70/30, Novolin® 70/30, Humalog® Mix 50/50™ and Humalog® Mix 75/25™:**
 - ◇ Take only twice a day (usually)
 - ◇ Is not as flexible as rapid-acting or regular insulin in terms of meal timing and food choices
 - ◇ Combines two different types of insulin in the same bottle
 - ◇ May help cover two meals
 - ◇ Lasts longer than rapid-acting or regular insulin

How will taking mealtime insulin affect your lifestyle?

Benefits	Considerations
Greater control	Insulin-injection supplies need to be brought for meals eaten away from home; insulin pens and travel cases make this easier.
More food choices and flexibility with timing of meals and snacks	Taking insulin at meals does not mean you can eat whatever you choose; you should still follow a balanced, healthy meal plan.
Easy to use	You may need to learn how to use a sliding scale plan, or an insulin-to-carbohydrate ratio, to figure out your dose. Your diabetes team will help you with this.
After-meal blood glucose closer to goals	There is a higher risk of low blood glucose if meals are delayed. Have glucose tablets, gels or treatments available at all times.

Why is a meal plan important?

As part of your overall diabetes plan, a registered dietitian can help you design a meal plan that features a broad range of healthy foods, including carbohydrates. While carbohydrate foods like sweets, fruits and fruit juices, breads, cereal, rice, pasta, milk and yogurt — and starchy vegetables, such as potatoes, corn, peas and beans — can raise your blood sugar, many also provide important nutrients. Work them into your meal plan by following these tips:

- Be aware of how much carbohydrate you intend to eat at each meal.
- Try to eat the same amount of carbohydrate at each meal, or work with your dietitian to learn how to adjust your mealtime insulin to your carbohydrate intake.
- Make sure you don't skip meals.

My mealtime insulin plan

My long-acting insulin is called _____.

I take _____ units at _____ o'clock.

My mealtime insulin is called _____.

I take:

_____ units at breakfast.

_____ units at lunch.

_____ units at dinner.



How well is your insulin-management plan working?

To find out how well your insulin plan is working, visit your diabetes team regularly so they can help you determine your target blood glucose. Then, in between visits, follow these six steps to success:

1. **Check your blood glucose before and after meals.** Your diabetes team will tell you when to check after each meal; it may be one hour after your first bite of food, or two.
2. **Track your results in a log book.** Include the type and amount of foods you eat throughout the day.
3. **Share these records with your diabetes team.** They will monitor changes in your glucose at meal times and adjust your insulin dose, if necessary.
4. **Be honest about your food records.** If you are not satisfied with your progress, discuss making changes to your food plan with a registered dietitian.
5. **Remember, reaching your goal may take some time.** Be patient and talk to your health care team if you feel discouraged along the way.
6. **See your health care provider regularly.** He or she will track your progress using a hemoglobin A1C test.

Being in control of diabetes feels great. Adding mealtime insulin to your daily schedule and following a balanced meal plan will bring you that much closer to achieving this goal!