30 Things

you should know about managing diabetes

BY KATIE BUNKER

Have YOU EVER TALKED to a diabetes educator about insulin, only to find that you've been injecting it improperly all along? With the mass of information that's dropped on your doorstep the day you're diagnosed with diabetes, it's easy to lose something in the shuffle. Here's what the experts want to remind you.

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INSULIN

1) **Nope, it doesn't really hurt.** Most needles used for insulin injections are small and thin, some as tiny as five-sixteenths of an inch in length, causing little or no pain.

2) **It's not unusual for type 2s to need insulin.** You may need to add insulin to your regimen to adequately control your blood glucose. It doesn't mean that you've "failed" at managing your condition.

3) **There's a right way to do it.** Always wash your hands first and wipe the top of the insulin vial with alcohol. Be sure to follow the directions for mixing your insulin if it's NPH. Tap the syringe to remove any air bubbles. It is also critical to mix NPH well in an insulin pen. And if you have a pen, remember the 5-second rule: Keep the thumb button pressed and the needle under the skin for 5 seconds to make sure all the insulin has gone in. Pen or syringe, remember to always inject at a 90-degree angle.

4) **Cold insulin has a bite.** Using insulin right out of the refrigerator is more likely to hurt than using insulin at room temperature. Insulin in use should be stored at room temperature.

5) **Feel the burn? It affects how quickly your insulin will kick in.** If you just did or are about to work out, remember that when the muscles near the injection site are exercised shortly before or after a shot, it will increase absorption rate.

BLOOD GLUCOSE MONITORING

6) **All meters are not created equal.** Since features of blood glucose meters vary quite a bit, do some research and check with your doctor and diabetes educator before you buy.

7) **Accuracy matters.** Be sure to use the control solution that comes with your meter, in order to test the meter's accuracy before checking your blood glucose.

8) **Meters are often free—it's the strips that'll cost you.** Often, you will be able to get a free blood glucose meter from your health care team, by rebate from the manufacturer, or from your health insurance company. The test strips are another matter—they can be pricey, and you may need to check how many per day your insurance will cover.

9) **Monitoring works. Really.** Ask your health care team whether and how often you should check your blood glucose.

If you have type 2, your recommended monitoring frequency will vary depending upon your overall level of control and the medications you take to treat your diabetes.

10) **Even in the digital age, written records help.** You may have a meter that stores data electronically, but it's still a good idea to write down your results, along with date and time, and other variables as well, like food, exercise, alcohol, and stress. You can then share this important information with your health care providers.

HYPOGLYCEMIA AND HYPERGLYCEMIA

11) **Repeat after me: hyper = high, hypo = low.** In other words, hyperglycemia means there is too much glucose in the blood, hypoglycemia means there is too little.

12) **Lows need glucose, highs need insulin (or exercise).** Know the difference, because administering insulin to someone (or yourself) during a low will cause even lower blood glucose. For type 2s, exercising can help bring down post-meal highs.

13) **Symptoms vary.** Hypoglycemia is usually characterized by sweating and shaking, a pounding heart, nervousness or irritability, or feeling weak, hungry, tingly, or confused. If you no longer have these warning signs, you are said to have hypoglycemia unawareness, which increases the risk of severe hypoglycemia. If you think you may have hypoglycemia unawareness, talk to your doctor about how to address this. Hyperglycemia, on the other hand, can cause headache, blurry vision, thirst, frequent urination, and dry skin. When in doubt, check your glucose level.

14) **It's a numbers game, and the 15-15 rule is a winner.** If you are experiencing hypoglycemia, take 15 grams of carbohydrate, then check your blood glucose again in 15 minutes. Repeat until you get back up to 70 mg/dl. If you are more than an hour away from a meal, you should probably go ahead and eat at least a small meal to ensure that hypoglycemia does not recur.

15) **Yup, your boss could be your lifesaver.** If your blood glucose is too low, you will need help from others around you. That's why you have to tell family, friends, and coworkers how to recognize a low and help you treat it. Talk to your doctor about whether you need to keep a glucagon kit on hand, and if so, make sure the people around you know how to use it. Call your doctor if you have multiple mild lows or any severe low. And wear an ID that indicates you have diabetes.

MEDICATIONS

16) **When it comes to type 2 meds, one size does not fit all.** There are six different classes of oral agents for type 2: alpha-glucosidase inhibitors (examples include Precose and Glyset), biguanides (metformin), DPP-4 inhibitors (Januvia), meglitinides (Starlix, Prandin), sulfonylureas (Amaryl, Glucotrol), and thiazolidinediones or TZDs (Actos, Avandia). Some manufacturers produce combination drugs that combine multiple type 2 drugs into one pill, like Glucovance or Avandamet.

17) **Older is sometimes better.** The newest advances aren't always the best options for everyone. You may be better off with good old metformin than with the newest drug on the market—don't be afraid to ask your doctor about your options.

18) **You're an individual, not a statistic.** Medications have different effects on different people. If you think something about your diabetes—for example, hypoglycemia unawareness—may affect what drugs will work for you, then you may be right. Be sure to discuss those things with your health care provider.

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19) It's not a good idea to play doctor. Never discontinue a medication without speaking with your health care provider first. Be sure to talk to your diabetes care provider about any problems you might be experiencing, and find out what medications are right for you.

20) Your pharmacist is your friend. He or she can help you plan out a schedule for your medication regimen, can help you sort out health insurance issues, and may be able to save you time and effort by contacting your doctor's office for refill authorizations. Also, your pharmacist often knows about all the medications you are on, and can alert you to potential drug interactions.

YOUR KIDNEYS

21) Damaged filters don't do the job. High blood glucose over long periods of time damages the kidneys. If this condition progresses, then they don't filter the blood properly, and may eventually fail altogether.

22) Eventually, kidney damage can lead to kidney failure. It's important to remember that for the most part, there are no signs or symptoms of pending kidney failure until kidney disease is already in advanced stages. This is why it's important to keep up with annual screenings.

23) That specimen cup? You should carry it proudly. Once a year, your doctor should perform a urine test to check for microalbumin in your urine, which if positive, indicates leakage of protein by the kidneys. This is an early sign of damage to the kidney by diabetes and/or high blood pressure. Your doctor may order other urine and blood tests to check how well your kidneys are functioning.

24) Kidney failure means dialysis or a transplant. That's why it's so important to keep up with kidney function screenings before kidney failure occurs.

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25) There's a lot you can do. Maintain good blood glucose control and good blood pressure levels, avoid high-protein diets, and have your doctor check your kidney function regularly. Blood pressure lowering drugs like ACE inhibitors and ARBs can slow the progress of kidney disease. Blood pressure control is especially important for people with high albumin levels in the urine (microalbuminuria and albuminuria).

YOUR EYES

26) In young and middle-aged Americans, most new blindness is due to diabetes. Retinopathy, the most common diabetic eye disease, can lead to blindness. Diabetes is responsible for 8 percent of blindness in this country.

27) Optometrists aren't just for people with glasses. Visit your eye doctor every year for dilated eye and visual exams—not just to check your vision, but also to check for diabetic eye diseases like retinopathy.

28) Healthy blood glucose levels are like carrots: Both are good for your eyes. Keeping up with blood glucose management lowers the risk of developing eye disease and keeps existing eye disease from getting worse.

29) It's worse under pressure. High blood pressure can cause damage to blood vessels in the eye, and can make diabetic eye disease worse. Talk to your doctor about ways to control your blood pressure.

30) Cholesterol counts. High cholesterol can also cause damage to blood vessels in the eye. Keep cholesterol down to keep eye disease from developing or worsening.

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