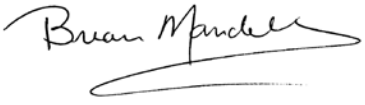
When people with diabetes go to surgery

Over the past decade, recommendations about the ideal glucose target in hospitalized diabetic patients have fluctuated. The controversy has extended to diabetic patients in various types of intensive care units and to those headed to the operating room. Although proposals exist on how to manage diabetes in the operating room, including intraoperative insulin infusions, outcomes probably depend more on how glucose is managed during the patient's postoperative stay in the hospital. For patients who are less critically ill and less medically complex, continuous insulin infusions are used infrequently, and insulin is often prescribed by algorithm or, archaically, by some form of "catch-up" sliding scale. Studies indicate that even the fairly loose glucose target of 70 to 180 mg/dL is achieved consistently in only a few patients.[1]

In view of a number of observations, including the link between hyperglycemia and postoperative wound infections, studies were designed to test the hypothesis that aggressively keeping glucose levels quite low in critically ill and postoperative diabetic patients would be beneficial. Instead, most of these studies found that overly tight glucose control in these settings led to untoward outcomes—and not only as the result of hypoglycemic episodes. Aiming for a modest serum glucose target of 150 to 200 mg/dL can significantly reduce the postoperative death rate, but the beneficial reduction is no greater if the target is less than 150 mg/dL.

With a looser glucose target, pre- and perioperative management of insulin-dependent diabetic patients can be simplified. Dobri and Lansang (page 702) discuss the key practical principles of managing insulin before the patient goes to the operating suite. They emphasize relevant pearls of insulin physiology and discuss several scenarios we often encounter.

In fact, the principles they review are equally useful to remember when we admit diabetic patients to the hospital with orders to keep them "npo" while planning and awaiting tests or other procedures. A key take-home point is that severely insulinopenic patients require some exogenous basal insulin, even when not eating.



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1. **Lopes R, Albrecht A, Williams J, et al**. Postoperative glucose control following coronary artery bypass graft surgery: predictors and clinical outcomes. J Am Coll Cardiol 2013; 61:e1601.

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