

Commencing insulin – what the patient needs to know

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Helping patients get the facts on insulin

Type 2 diabetes, as we know, is a progressive disorder. A study conducted as part of the United Kingdom Prospective Diabetes Study (UKPDS) showed that individuals with newly diagnosed type 2 diabetes have 50% of the normal insulin secretion at the time of diagnosis. After 6 years, this drops to 25%.¹

Those diagnosed with type 2 diabetes will need insulin at some stage during their treatment. When initiated soon after diagnosis, insulin has been proven to offer superior blood glucose management to oral hypoglycemic agents.² Though there are new forms on the market, insulin itself has been used for over 80 years. We know what it does, and the side effects of its use.

Insulin remains our most potent weapon against complications and mortality related to uncontrolled type 2 diabetes. It is also the only hypoglycaemic agent that can completely correct impaired insulin secretion. Despite insulin's proven effectiveness, however, individuals often refuse to initiate injections, for a number of reasons. The negative perception of insulin therapy many people hold is such that now there is even a name for it – psychological insulin resistance (PIR).³

Psychological insulin resistance is an epidemic among individuals with type 2 diabetes. But it's also a problem with health professionals. Researchers suggest that health professionals hesitate to initiate insulin because of concerns about hypoglycaemic risk and the time needed for education, as well as a general lack of understanding of the profiles of newer insulins on

the market.³ Recently, the Diabetes Attitudes Wishes and Needs (DAWN) study revealed that health professionals don't seem to be aware of insulin's positive impact on type 2 diabetes, and that they only tend to use it as a consequence of poor management.⁴

Patients need to understand the reason for the earlier commencement of insulin, and they should also be told at the time of diagnosis that insulin is a treatment possibility. They should understand that insulin is not being used as a punishment, that it is simply one of the many resources available to manage their type 2 diabetes. They also need to understand that it is not their fault that they are undergoing this treatment, and that they need insulin only because of the natural progression of diabetes.

Insulin's side effects

While weight gain can be a side effect of insulin, this only tends to occur when the dose is incorrect, or when the insulin peaks and troughs are mistimed. Insulin treatment, in and of itself, does not cause patients to gain weight. Injected insulin simply replaces what the body can no longer provide naturally. The correct type and dose will minimise both hypoglycaemia and excursions between high and low blood glucose levels, allowing nominal weight gain.

Insulin initiation causes a drop in HbA1c (glycated haemoglobin), which can, in turn, cause a transient worsening of pre-existing complications. While not limited to insulin initiation, this phenomenon can be distressing and confusing for the individual and may lead to nonadherence. Communication that this worsening is only temporary may alleviate much of the impact.

To best serve the patient's use of insulin, there are a number of simple steps general practitioners can take. General practitioners can:

- update the patient's National Diabetes Services Scheme (NDSS) status to 'insulin requiring' (the NDSS form needs to be completed and faxed to the Diabetes Australia office in your local state or territory)
- decide on which type of insulin should be used (premixed or basal bolus delivery)
- decide on the mode of delivery – eg. vials, pen fill (disposable or supply pen, Solostar or Flexpen) – and write prescription
- explain delivery technique, storage of insulin, sharps disposal, supply of needles/syringes to patient (consider referral to a diabetes educator)
- explain hypoglycaemia and treatment to patient (consider referral to a diabetes educator), and
- review sick day treatment guidelines. ♦

1. Twigg S, Phillips P. Starting insulin in type 2 diabetes. *Medical Observer* 4 May 2007.

2. Weng J, Li Y, Xu W et al. Effect of intensive insulin therapy on β -cell function and glycaemic control in patients with newly diagnosed type 2 diabetes: a multicentre randomised parallel-group trial. *Lancet* 2008;371:1753–60.

3. Gebel E. Embracing insulin. *Diabetes Forecast* 2008;61:45–7.

4. Diabetes Attitudes Wishes and Needs (DAWN) study. Available at http://dawn-study.org/documents/article_page/document/barriers.asp [Accessed March 2009].