

# Psychological insulin resistance: A guide for practice nurses

Marie Clark

Good glycaemic control in people with type 2 diabetes often requires supplementing with insulin therapy. However, this is seldom initiated early or aggressively enough. This article explains how a psychological opposition towards insulin use in both people with diabetes and prescribers has led to widespread psychological insulin resistance (PIR). The obstacles from the patient's perspective extend beyond a simple fear of needles, and when these personal barriers are recognised and addressed reluctance to start insulin therapy can be overcome. Furthermore, it seems likely that a high percentage of cases where PIR occurs could be prevented if clinicians introduce the possible need for insulin early in treatment. Intervention strategies that address factors linked with PIR may be used to facilitate the timely initiation of insulin therapy at an effective dose.

The burden that diabetes has placed on the health care system as a result of increased morbidity, mortality and economic costs has continued to increase each decade. As type 2 diabetes is an insidious condition characterised by defects in both insulin secretion and insulin action, in order to minimise the risks of diabetes complications effective therapy involves lifestyle change and polypharmacy. Indeed, prospective randomised controlled trials have provided unequivocal evidence of the benefits of good glycaemic control through intensive treatment in improving health outcomes in people with diabetes (Diabetes Control and Complications Research Group, 1990; UK Prospective Diabetes Study (UKPDS) Group, 1998). However, in clinical practice optimal glycaemic control remains difficult to achieve

and a number of studies have documented that sub-optimal control of blood glucose, blood pressure and lipids remains common in people with diabetes (Diabetes Control and Complications Research Group, 1990; UKPDS Group, 1998). The reasons for poor glycaemic control are complex and relate to the disease process itself, the inadequacy of therapeutic regimens and the attitudes and beliefs of both the person with diabetes and their healthcare practitioner.

In view of the progressive decline in  $\beta$ -cell function in type 2 diabetes, good glycaemic control often requires insulin therapy. Unfortunately, many individuals who could benefit from insulin do not receive it early enough, if at all, and, where it is prescribed, the regimen is frequently not aggressive enough to achieve the glycaemic goals that

## Article points

1. Both patient and healthcare professional attitudes towards the use of insulin in type 2 diabetes need changing to ensure the best therapy is received by all individuals.
2. Strategies to minimise a person's opposition to insulin use should include identifying personal obstacles, overcoming phobia of needles, discussions about the real risk of hypoglycaemia and efforts to restore a sense of personal control to the person with diabetes.
3. Healthcare professionals should introduce the idea of insulin therapy as early as diagnosis and not use it as a threat against non-concordance to oral therapy.

## Key words

- Psychological insulin resistance
- Beliefs
- Attitudes
- Needle phobia

Marie Clark is a Chartered Health Psychologist and a Lecturer in Health Psychology at UCL, London.

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1. Psychological insulin resistance can be present in both healthcare professionals and the person with diabetes.
2. Healthcare professionals sometimes use insulin as a threat or regard it as last-resort therapy.
3. People with diabetes can have a fear of needles or injections, fear or hypoglycaemia or weight gain, worries over the practicalities of injections and their perceived failure with oral medications.
4. Tackling psychological insulin resistance in people with diabetes first needs to start with the healthcare professional identifying and addressing their patient's objections to the regimen and fears.

have been proven to reduce morbidity and mortality (Home et al, 2003; Brown et al, 2004; Dailey, 2005; Davidson, 2005). Two possible factors in the explanation for this are a personal opposition to taking insulin among people with diabetes and a reluctance among healthcare professionals to prescribe insulin.

This resistance is based on a number of factors, primarily beliefs and perceptions regarding diabetes and its treatment, the nature and consequence of insulin therapy and how others would regard insulin therapy (Leslie et al, 1994; Leslie and Satin-Rapaport, 1995; Rubin and Peyrot, 2001; Korytkowski, 2002; Koerbel and Korytkowski, 2003; Funnell et al, 2004; Peyrot, 2004; Polonsky and Jackson 2004).

Negative attitudes and misconceptions about insulin therapy are frequently reported by both people with diabetes and health care practitioners (Wolffenbuttel et al, 1993; Miller, 1995; Hunt et al, 1997; Wallace and Matthews, 2000). It is of interest to note that Lauritzen and Scott (2001) suggest that negative attitudes to insulin may in fact begin with the physician, for example if a GP uses terminology such as 'mild diabetes' the foundations of psychological barriers to insulin therapy can be instigated at the time of diagnosis. Furthermore, few of the GPs in Lauritzen and Scott's study approached the subject of insulin therapy with their patients with type 2 diabetes. When reference was made to insulin it was commonly in the context of a 'threat' to enforce adherence to existing therapy.

People with type 2 diabetes are often reluctant to begin insulin, known as psychological insulin resistance (PIR; Leslie et al, 1994; Leslie and Satin-Rapaport, 1995) and in many cases delay the start of insulin therapy for lengthy periods of time, raising the risk for long-term complications. In the UKPDS (1995), 27% of those randomised to insulin therapy initially refused it. A number of beliefs and attitudes have been identified by a number of studies (for example: Bashoff and Beaser, 1995; Okazaki et al, 1999; Zambanini et al, 1999; Mollema et al, 2000; Skovlund et

al, 2003; Bogatean and Hancu, 2004) and include:

- trypanophobia (fear of injections) or belonephobia (fear of needles and sharp objects)
- fear of hypoglycaemia
- concerns about dependency and loss of personal freedom
- fear of weight gain
- worries about the inconvenience of injections and proper injection techniques
- the belief that the need to start insulin reflects a worsening of the condition and 'failure to manage' on the part of the individual affected.

### Addressing the problem

When clinicians are faced with PIR, Polonsky and Jackson (2004) suggest that the following practical intervention strategies should be considered.

#### Identify the individual's personal obstacles.

Considering that most people with type 2 diabetes will eventually use insulin, the issues concerning insulin should be given special attention. Instead of trying to convince the person of the practitioner's viewpoint, questions such as 'What are your greatest concerns about starting insulin?' get directly to the individual's fears. Addressing specific concerns and highlighting the advantages of controlled blood glucose levels (for example, more energy, less complications and less trips to the bathroom at night) as well as pointing out the advantages of modern insulin delivery systems, can greatly reduce the degree of PIR.

#### Tackle 'needlephobia'

In the small number of cases where people are really too fearful of needles to begin insulin therapy, practitioners may want to consider referral to a mental health specialist familiar with psychological treatments for this condition, who might subsequently give cognitive behavioural therapy. As true needlephobia is extremely uncommon, most such phobias can usually be resolved quite rapidly. Importantly, recent advances in

insulin delivery systems, such as pens, can help to minimize needle fear in insulin-naïve patients. Since, historically, people with diabetes injected insulin using glass syringes with detachable needles, which were large and injections were painful, this may well be the image that is still prevails in people's minds today. However, pens are easier to operate and appear less intimidating and ominous than the traditional bottle and syringe. This may therefore make them a more acceptable option to insulin-naïve patients struggling with PIR.

#### Discuss the real risks of hypoglycaemia

The worries of people with type 2 diabetes can often be traced to the sometimes dramatic hypoglycaemic episodes portrayed in films and the media. Patients should be reassured that severe hypoglycaemia (where help from another person is required) is quite rare in type 2 diabetes, even among those on insulin. In the UKPDS, for example, the annual incidence of severe hypoglycaemia in people treated with insulin was <3.0% (UKPDS, 1998). More frequent blood glucose monitoring and a careful review of results – as well as further diabetes education so that people with diabetes become more skilled regarding recognition and treatment of hypoglycaemia – can reduce the risk of potential problems even further.

#### Frame the insulin message properly

Removing any sense of personal guilt the individual may be harbouring is critical. It should be stressed to the person with diabetes that they have not failed with their diabetes management. Time should be taken to explain that diabetes is known to be a progressive condition and therefore more or stronger medications may be needed over time to achieve or maintain glycaemic targets.

#### Restore a sense of personal control

When necessary, introduce insulin as a brief, temporary experiment. Of course, people with diabetes always retain the choice, even if it is not directly offered, of whether they

want to continue with a treatment. It is by putting insulin forward as a possible alternative treatment – one that is supported by the healthcare professional – that attitudes towards such therapy can change by reminding people that insulin does not mean they will lose control of their lives.

#### Enhance self-efficacy as quickly as possible

When insulin is first introduced, the process of insulin use should be demonstrated in the consulting room and then the individual should be encouraged to practice before returning home. With the support and encouragement of a caring clinician, the hands-on discovery that injections are not difficult or overly painful can be an enormous confidence boost. Importantly, the number of recommended additional behaviour changes (for example, more frequent blood-glucose monitoring and major changes in the timing and composition of foods) should be kept to a minimum so that any reluctant individuals do not become overwhelmed and thus even more resistant to initiating insulin therapy.

#### Conclusion

In insulin naïve people with type 2 diabetes, PIR is not uncommon. It is likely that PIR contributes to unnecessarily long delays in initiating insulin therapy and consequently to extended periods of hyperglycaemia. Reasons for avoiding insulin extend beyond a simple fear of needles and often involve deeply held beliefs about insulin and the nature of diabetes. The way healthcare professionals introduce and communicate with their patients about insulin, in particular when referring to insulin therapy as a threat or a last resort, may also be a major contributor to PIR.

When an individual's personal obstacles to insulin therapy are recognised and addressed, reluctance to start insulin therapy can be overcome. Importantly, it seems probable that the majority of PIR cases could be prevented if healthcare professionals begin to introduce the possible need for insulin early in treatment. It is essential that using insulin

#### Page points

1. To further tackle psychological aversion to insulin, healthcare professionals must discuss in detail with the patient the real risks of hypoglycaemia, frame the use of insulin correctly and restore self control and self-efficacy as quickly as possible.
2. It is likely that psychological insulin resistance contributes to unnecessarily long delays in initiating insulin therapy and consequently to extended periods of hyperglycaemia.
3. The number of people with psychological insulin resistance could possibly be reduced if healthcare professionals began to introduce the eventual need for insulin early in treatment.

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1. Healthcare professionals should aim to support the knowledge of their patients, especially in explaining that insulin therapy does not indicate a personal failure.

as a means of threatening or blaming patients is ceased and the focus shift onto helping people with diabetes see that starting insulin is not necessarily the result of poor self-care but rather an effective therapeutic tool for the treatment of type 2 diabetes. ■

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