Practical guidance to insulin management

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Weight management
Depression screening

Abstract

The practical guidance to insulin management is a simple tool for health care providers, particularly primary care physicians (PCPs). Developed by experts in diabetes care at an international meeting, it aims to help physicians make key decisions to optimize insulin management and decrease long-term morbidity risk. With a growing role for PCPs in type 2 diabetes, the practical guidance focuses on confident, appropriate and timely insulin initiation. Using the acronym ‘TIME’ (Targets, Insulin, Managing weight, Encouragement and support) the practical guidance aims, in a visually appealing format, to help physicians address the challenges of insulin management with their patients, from diagnosis through insulin initiation to follow-up.

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1. Introduction

Rising patient numbers and changes in health care policy have shifted insulin initiation in type 2 diabetes from secondary to primary care. A major challenge for primary care physicians is to assimilate and utilize all relevant information regarding appropriate insulin initiation. The practical guidance presented here (reproduced on the following pages) is a simple reference tool for the clinic, reflecting insights gathered at a meeting organized by Novo Nordisk. Attended by leading experts from Europe, Canada, Israel and Turkey, the objective of this meeting was to formulate a ‘call to action’ to help physicians overcome these challenges. The practical guidance has
been developed by experts in diabetes management to support all physicians, but especially those in primary care.

Throughout the practical guidance, the key pillars of insulin management are visually organized using the acronym TIME as a helpful memory aid:
• Targets
• Insulin
• Managing weight
• Encouragement and support

In terms of discussing insulin, these key pillars of TIME have often only been considered at the time of insulin initiation. The challenge is to ensure that insulin management is addressed throughout the diabetes continuum with a more proactive approach to increase awareness and acceptance of insulin therapy earlier rather than later. Therefore, the practical guidance is divided into four visual sections, according to time points where the role of insulin should be addressed:
• At diagnosis
• Before insulin is needed
• Insulin initiation
• Follow-up

Every time physicians see a patient with type 2 diabetes, the practical guidance provides advice across all aspects of TIME appropriate to the specific time point. For each key time point and pillar, there are ‘tricks of the trade’ and patient management tips, as well as important points for discussion with patients. These aspects make the information highly relevant to daily clinical practice. Consulting the relevant time point prior to an appointment with a patient, and thinking about each of the key pillars, will help physicians optimally manage diabetes through appropriate discussion and use of insulin. The practical guidance can be used to start the discussion about insulin early, build a strong partnership with patients, and ensure optimal diabetes care to decrease long-term morbidity risk.

2. How this practical guidance was developed and the role of Novo Nordisk

All authors have been involved throughout the development of the practical guidance, from initial concept to providing final approval. At an international meeting, held in May 2009, 130 expert physicians gave their feedback on what important information should be included in a practical guidance for insulin management to formulate a ‘call to action’. The feedback was reviewed by the authors, and the content of the practical guidance developed. The meeting upon which the content of this practical guidance is based was funded by Novo Nordisk. The authors are all members of a Novo Nordisk advisory board, for which they are paid an honorarium. Medical writing assistance and layout concept support was provided by Eleanor Steele and Gary Burd at Complete HealthVizion; this assistance was funded by Novo Nordisk, who also had a role in the review of the practical guidance for scientific accuracy.

Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>ADA</td>
<td>American Diabetes Association</td>
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<tr>
<td>EASD</td>
<td>European Association for the Study of Diabetes</td>
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<tr>
<td>HbA1c</td>
<td>Glycosylated haemoglobin</td>
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<tr>
<td>FPG</td>
<td>Fasting plasma glucose</td>
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<tr>
<td>PPG</td>
<td>Post-prandial glucose</td>
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<tr>
<td>LDL-cholesterol</td>
<td>Low-density lipoprotein cholesterol</td>
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<tr>
<td>HDL-cholesterol</td>
<td>High-density lipoprotein cholesterol</td>
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<tr>
<td>OAD</td>
<td>Oral anti-diabetic drug</td>
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<tr>
<td>ITAS</td>
<td>Insulin Treatment Appraisal Scale</td>
</tr>
<tr>
<td>NPH</td>
<td>Neutral protamine Hagedorn</td>
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<tr>
<td>PCP</td>
<td>Primary care physician</td>
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Conflict of interest statement

Luigi Meneghini has received funding for research from Novo Nordisk, sanofi-aventis and Medtronic Minimed, has acted as a consultant to Novo Nordisk, is a member of an advisory board for Novo Nordisk, and is a member of a speaker bureau for Novo Nordisk, Eli Lilly and sanofi-aventis. Sara Artola has received honoraria from Novo Nordisk, GlaxoSmithKline, Merck Sharp & Dohme, Novartis, Servier, sanofi-aventis and Eli Lilly, is a member of advisory boards for Novo Nordisk, GlaxoSmithKline, Merck Sharp & Dohme, Novartis, Servier, sanofi-aventis and Eli Lilly, and has received research funding from Novo Nordisk, GlaxoSmithKline, Merck Sharp & Dohme, Novartis, Servier, sanofi-aventis and Eli Lilly. Salvatore Caputo has received honoraria from Eli Lilly, GlaxoSmithKline, Merck Sharp & Dohme, Novo Nordisk and Takeda, has received consulting fees from Eli Lilly, GlaxoSmithKline, Merck Sharp & Dohme, Novo Nordisk and Takeda, and has received consulting fees from Eli Lilly, GlaxoSmithKline, Merck Sharp & Dohme, Novo Nordisk and Takeda. Taner Damci has received honoraria from Novo Nordisk, Lilly, sanofi-aventis, Merck Sharp & Dohme, Bristol Meyer Squibb, Servier, AstraZeneca, Abbott, Roche, Roche Diagnostics, Bilim Ilaç, Sanovel, Eczacibaşi. Grzegorz Dzida is a member of an advisory board for Novo Nordisk. Marcel Kaiser owns stocks of Novo Nordisk and is a member of an advisory board for Novo Nordisk. Kamlesh Khunti has received funding for research from Lilly, MSD, Novartis, Novo Nordisk, Pfizer, sanofi-aventis and Unilever and has acted as a consultant to or received honoraria from AstraZeneca, BMS, Lilly, MSD, Novartis, Novo Nordisk, Pfizer, sanofi-aventis, Takeda and Unilever. Andreas Liebl has received honoraria for presentations from Eli Lilly, MSD, Roche, and Novo Nordisk, and is a member of
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At diagnosis

Before insulin is needed

Insulin initiation

Follow-up

DISCLAIMER: If your patient with type 2 diabetes has co-morbidities, or is at high risk of complications, please consider consulting with a specialist or referring the patient to a specialist to ensure appropriate treatment. Targets may vary by country.

PATIENT MANAGEMENT

Glycaemic treatment targets [1,2]

- **HbA1c <7%**
- FPG 70–130 mg/dL (3.9–7.2 mmol/L)
- PPG <180 mg/dL (<10 mmol/L)

Patients should achieve glycaemic targets within 3–6 months of diagnosis. After 3 months, if the patient has HbA1c >7%, consider adding additional therapy. Targets should be adhered to from diagnosis onwards.

Individualized glycaemic goals [1,2]

Consider setting less stringent glycaemic treatment targets with:

- Presence of advanced complications or co-morbidities
- Cardiovascular disease
- Cerebrovascular disease
- Advanced microvascular complications

PATIENT DISCUSSION

- Involve your patient in achieving their glycaemic targets
  - Achieving and maintaining good glycaemic control is realistic and important for long-term health
  - Self-monitoring of blood glucose can assist in maintaining glycaemic control
  - Be aware of the importance of glycaemic control
  - Better quality of life
  - More energy

Tell your patient to monitor for:

- Hypoglycaemia
- Hyperglycaemia
- Neuropathy
- Retinopathy
- Nephropathy
- Cardiovascular disease
- Diabetic foot problems

Address co-morbidities:

- Antihypertension therapy
- Antithrombotic therapy

Think about the next steps ...

- Monitor glycaemic targets every 3 months
- Consider additional agents, including insulin, if glycaemic goals not met

PATIENT DISCUSSION

- Explain rationale for reaching glycaemic targets
  - Reduced symptoms
  - Reduced complications, including stroke and heart attack [6–8]
  - Better quality of life
  - More energy

- Consider when each patient may need to start insulin

Weight and treatment decisions

- Consider patient weight when making treatment decisions
- Some agents are associated with a relative weight benefit [1,9–14]

Address co-morbidities:

- Antihypertension therapy
- Antithrombotic therapy

Insulin

- Metformin, in combination with lifestyle changes, is the first-line treatment of choice for type 2 diabetes. Guidelines recommend adding either basal insulin or a second anti-diabetic drug to ongoing metformin when additional therapy is necessary.

PATIENT MANAGEMENT

- Consider insulin at diagnosis is recommended for individuals presenting with weight loss or other severe hyperglycaemic symptoms or signs.

Think about the next steps ...

- Monitor glycaemic targets every 3 months
- Consider additional agents, including insulin, if glycaemic goals not met

PATIENT DISCUSSION

- Introduce your patient to the eventual need for insulin so that it is not used as a punishment
- Type 2 diabetes results from insufficient insulin secretion due to beta-cell dysfunction
- Over time, beta-cell function continues to deteriorate resulting in increasing blood glucose levels
- Elevated glucose levels can lead to diabetes complications, progression of disease and deteriorating health

- Tell your patient to monitor for:
  - Hypoglycaemia
  - Hyperglycaemia
  - Neuropathy
  - Retinopathy
  - Nephropathy
  - Cardiovascular disease
  - Diabetic foot problems

- Treatment of elevated blood sugars slows the gradual worsening of health

- Insulin injections will eventually be required to replace the body’s own insulin, control blood sugars and slow disease progression

Cardiovascular targets [3–5]

- Blood pressure <130/80 mmHg
- LDL-cholesterol <100 mg/dL (<2.6 mmol/L); <70 mg/dL (<1.8 mmol/L) with underlying microvascular disease
- HDL-cholesterol
  - Men: >40 mg/dL (>1.0 mmol/L)
  - Women: >50 mg/dL (>1.5 mmol/L)
- Triglycerides <150 mg/dL (<1.7 mmol/L)

Regular screening for complications of:

- Eyes
- Kidneys
- Feet
- Lipids
- Blood pressure

- Treat the patient’s condition

- Regular visits to their doctor for monitoring

- Focus on lifestyle changes

- Monitor progress and adjust treatment accordingly
MANAGING WEIGHT

PATIENT MANAGEMENT

Every kilo counts

- Loss of just one kilo in patients with type 2 diabetes can have health benefits [15–18]:
  - Average 3–4 months prolonged survival
  - Improvements in lipid levels and blood pressure control
  - Reduced risk of coronary heart disease

PATIENT DISCUSSION

- Weight
  - Small changes in weight can have a large impact on health
  - Weight loss can lead to decreased need for medications
  - Discuss the relationship between weight and other factors, including treatment options, calorie intake, activity and improving blood glucose
  - Loss weight gain is as important as weight loss
  - A weight-loss goal should be realistic and achievable
  - Expect gradual benefits, not instant results
  - Discuss the relationship between patient weight and insulin resistance/glycaemic control
  - Weight and waist circumference should be measured regularly

- Diet
  - A healthy diet helps weight management:
    - Food log/diary
    - Screen for eating disorders to identify patients who may be at risk
  - Arrange a consultation with a dietician, if possible
  - See Appendix for daily activity suggestions

- Exercise
  - Increasing physical activity helps weight management:
    - See Appendix for daily activity suggestions
    - Patients should start with 10 minutes daily if new to exercise
    - Patients should aim to accumulate at least 30 minutes of physical activity each day

ENCOURAGEMENT AND SUPPORT

PATIENT MANAGEMENT

5As [19,20] at diagnosis

1. ASSESS the patient’s beliefs and knowledge about type 2 diabetes and discuss how these beliefs may impact their diabetes and health
2. ADDRESS their concerns (therapy, insulin, complications etc.) using educational resources
3. ADVISE the patient on healthier lifestyle changes and negotiate their implementation
4. ASSIST with suggestions to enable change and offer support
5. ARRANGE the next appointment to review targets and progress, and consider treatment adjustments. Follow up with the patient every 3–6 months

EDUCATIONAL RESOURCES FOR PHYSICIANS

- Discuss challenging cases with a local specialist or PCPs in your area
- Join a local PCP diabetes group
- Access online education modules:
  - http://www.idf.org/education-modules
  - www.easd.org – click on the “Education” tab
  - http://www.fend.org/proj_cr1.html

PATIENT DISCUSSION

At diagnosis, information and support networks are important

- Provide educational materials on diabetes management
- Ongoing professional support – arrange for the patient to see a diabetes nurse, dietician or other professional, if possible
- Screen for eating disorders to identify patients who may be at risk
- Suggest joining a local patient support group
- Online resources to suggest

DISCLAIMER: If your patient with type 2 diabetes has co-morbidities, or is at high risk of complications, please consider consulting with a specialist or referring the patient to a specialist to ensure appropriate treatment. Targets may vary by country.
DISCLAIMER: If your patient with type 2 diabetes has comorbidities, or is at high risk of complications, please consider consulting with a specialist or referring the patient to a specialist to ensure appropriate treatment. Targets may vary by country.

**Targets**

**Patient Management**

- Indicators for insulin initiation [1,2]:
  - HbA1c >7% on 1, 2 or more OADs (maximal doses) for >3-6 months.
- Glycaemic treatment targets [1,2]:
  - HbA1c <7%
  - FPG 70-130 mg/dL (3.9–7.2 mmol/L)
  - PPG <180 mg/dL (<10 mmol/L)

**Cardiovascular targets [3–5]**

- Blood pressure <130/80 mmHg
- LDL-cholesterol <100 mg/dL (<2.6 mmol/L) for patients with diabetes; <70 mg/dL (<1.8 mmol/L) with underlying macrovascular disease
- HDL-cholesterol:
  - Men: >40 mg/dL (>1.0 mmol/L)
  - Women: >50 mg/dL (>1.5 mmol/L)
- Triglycerides <150 mg/dL (<1.7 mmol/L)

Targets may require modification dependent on status.

**Patient Discussion**

- Measuring blood glucose will be important
  - FPG is the level of blood glucose taken on an empty stomach (usually on waking up)
  - PPG is the level of blood glucose following a meal
  - Regular self-monitoring of blood glucose can help determine whether the body’s own production of insulin is sufficient to control blood sugars both when fasting and after a meal

- Review the patient’s interpretation of their self-monitored blood glucose values and compare to target values.

**Insulin**

**Patient Management**

- Is it time for a change?
  - If planned glycaemic control is not being achieved with 1 or 2 OADs within 3–6 months, it may be time to start insulin
  - Actively address perceived barriers to insulin therapy

- Prepare for change
  - Due to the progressive nature of beta-cell dysfunction the body is now producing insufficient insulin, resulting in rising levels of blood glucose
  - Taking positive action with insulin is an effective method of ensuring good glycaemic control and preventing worsening of health

- An effective, simple and reliable option is once-daily basal insulin

**Patient Discussion**

- Prepare patients for insulin to ensure a smooth transition
MANAGING WEIGHT

PATIENT MANAGEMENT

Every kilo counts

The benefits of weight management continue to be important [14,21–26].

- Weight loss is associated with a reduced risk of death and cardiovascular disease
- Concern about weight gain can be a patient barrier to insulin initiation

PATIENT DISCUSSION

Weight management

Discuss the lifestyle modifications you agreed:

- Celebrate success and try to overcome barriers
- Reassess and update weight management goals – weight maintenance (or prevention of weight gain) may now be appropriate
- Re-emphasize the importance of diet and exercise in achieving optimum health benefits

PATIENT DISCUSSION

“Are you achieving your diet and exercise goals?”

“Are there other lifestyle changes you could make?”

ENCOURAGEMENT AND SUPPORT

PATIENT MANAGEMENT

5As [19,20] before insulin is needed

1. ASSESS patient expectations regarding diabetes control and feelings about insulin and lifestyle options
2. ADDRESS knowledge deficits, patient expectations and barriers towards starting insulin therapy. Review the progressive nature of beta-cell dysfunction
3. ADVISE the patient on their current treatment and future options for their treatment regimen, including the option of insulin initiation to improve glycaemia and prevent diabetes progression and complications
4. ASSIST with maintaining lifestyle changes through negotiation, encouragement and suggestions; engage the patient in their diabetes management
5. ARRANGE the next appointment, or a follow-up call, to monitor their status. Make sure to follow up with the patient every 3-6 months

PATIENT DISCUSSION

Insulin Treatment Appraisal Scale (ITAS)

Begin assessing the potential barriers to insulin the patient may face. Use the ITAS questionnaire:

http://ukpmc.ac.uk/articlerender.cgi?tool=pubmed&pubmedid=18096074

Support from other physicians

Share insulin strategies with colleagues; learn from each other’s experiences.

Depression

Screen your patient with a short depression questionnaire (see Appendix) and repeat as needed (changes in health, diabetes control or adherence).

Breaking down the barriers

- Starting insulin at the right time will help with glycaemic control and slow disease progression
- Basal insulins have minimal risks
- Modern injection devices (insulin pens) are convenient, discreet and simple to use
- Insulin can fit in with daily life
- Suggest involving family and friends for support
- Give your patient materials they can take away and use at home

Reassure your patient they have done nothing wrong

- Diabetes progression means insulin will be needed eventually

- Beta-cell dysfunction is progressive and insulin is an expected addition to blood glucose management
- Adding insulin does not mean health is deteriorating; rather, it is an effective step to prevent diabetes progression (complications)
- Lifestyle interventions continue to be important; they may delay the need to advance treatment and they reduce cardiovascular risk

Patient support

- Recommend that the patient joins a local patient group
- Encourage your patient to talk to someone successfully using insulin therapy
**PATIENT MANAGEMENT**

**Insulin initiation**
- Insulin initiation and adjustment recommendations
  - Ask the patient to self-inject a token amount of insulin (1-2 units) during an appointment
  - Discuss initial insulin dose, timing (dinner, bedtime or morning) and dose adjustments including titration algorithm (such as 303) based on agreed blood glucose targets
  - Review importance of glucose self-monitoring for insulin self-titration

**PATIENT DISCUSSION**
- Physician-driven titration and patient-driven titration
  - Discuss and agree on day-to-day blood glucose targets with the patient
  - Empower the patient to assist in insulin dose adjustment
  - 303 titration algorithm [12,27,28]

**HbA1c**
- HbA1c <7%

**TARGETS**

**PATIENT MANAGEMENT**

**Glycaemic treatment targets [1,2]**
- HbA1c <7%
- FPG 70–130 mg/dL (3.9–7.2 mmol/L)
- PPG <180 mg/dL (<10 mmol/L)

**Cardiovascular targets [3–5]**
- Blood pressure <130/80 mmHg
- LDL-cholesterol <100 mg/dL (<2.6 mmol/L) for patients with diabetes; <70 mg/dL (<1.8 mmol/L) with underlying macrovascular disease
- HDL-cholesterol
  - Men: >40 mg/dL (>1.0 mmol/L)
  - Women: >50 mg/dL (>1.5 mmol/L)
- Triglycerides <150 mg/dL (<1.7 mmol/L)

**Basal insulin**
- Basal insulin analogues have proven efficacy, once-daily dosing and lower risk of hypoglycaemia than alternative insulin therapies
- Also, the basal insulin analogue once-daily insulin detemir offers less weight gain than NPH or glargine [11,13,14,29,32]
- Pen devices for insulin delivery are convenient, painless and discreet

**At diagnosis**

**Before insulin is needed**

**Follow-up**

**At diagnosis**

**Before insulin is needed**

**Insulin initiation**

**Follow-up**

**DISCLAIMER:** If your patient with type 2 diabetes has co-morbidities, or is at high risk of complications, please consider consulting with a specialist or referring the patient to a specialist to ensure appropriate treatment. Targets may vary by country.
MANAGING WEIGHT

PATIENT MANAGEMENT

Every kilo counts

- Weight is a crucial consideration at the insulin initiation stage, with weight gain a perceived side effect of insulin use [9–12,23].
- One-daily insulin detemir is associated with less weight gain than other available insulin options, and a potentially greater benefit in patients with higher baseline BMI [11,13,14,29,32].

- Consider screening for eating disorders or depression if the issue of weight worsens (see Appendix).

PATIENT DISCUSSION

Weight gain does not have to be inevitable

- Explain the effect of basal insulin therapy on weight.
- Acknowledge weight maintenance or weight loss as a valuable achievement.
- Update weight loss goal – weight maintenance may now be appropriate.
- Review and counsel your patient regarding eating habits, calorie intake and activity level if weight increases.
- Re-visit diet and exercise.

ENCOURAGEMENT AND SUPPORT

PATIENT MANAGEMENT

5As [19,20] for insulin initiation

1. ASSESS what the patient believes about insulin and negotiate what they can achieve.
2. ADDRESS any outstanding barriers by discussing them and using educational resources.
3. ADVISE on insulin initiation, talking through dosing, injector and avoiding hypoglycaemia, as well as recognizing and treating low blood glucose.
4. ASSIST the patient in initiating insulin, with support from a diabetes nurse, if possible.
5. ARRANGE for the timely follow-up to ensure patient adherence and identify and resolve any potential difficulties or challenges.

PATIENT DISCUSSION

Engaging the patient with their insulin therapy

"It is a partnership – we are working together to improve glucose control and reduce complications."

- Insulin pens make self-injection simple.
  - Explain benefits of using pen injection devices.
  - Demonstrate injection technique for subcutaneous injections with a practice pen.
  - Highlight sites for injection (abdomen, arm, buttock or thigh).
  - Explain safe disposal of used needles.
  - Let the patient try an injection test.
  "Using an insulin pen is convenient, discreet and simple."
DISCLAIMER: If your patient with type 2 diabetes has co-morbidities, or is at high risk of complications, please consider consulting with a specialist or referring the patient to a specialist to ensure appropriate treatment. Targets may vary by country.

**TARGETS**

**PATIENT MANAGEMENT**

- Glycaemic treatment targets [1,2]
  - HbA1c <7%
  - FPG 70–130 mg/dL (3.9–7.2 mmol/L)
  - PPG <180 mg/dL (<10 mmol/L)

- Cardiovascular targets that should continue to be monitored include [3-5]:
  - Blood pressure <130/80 mmHg
  - LDL-cholesterol <100 mg/dL (<2.6 mmol/L) for patients with diabetes: <70 mg/dL (<1.8 mmol/L) with underlying macrovascular disease
  - HDL-cholesterol
    - Men: >40 mg/dL (>1.0 mmol/L)
    - Women: >50 mg/dL (>1.5 mmol/L)
  - Triglycerides <150 mg/dL (<1.7 mmol/L)

- Indicators for titration and intensification [1,2]

  Continue to titrate basal insulin to reach FPG targets.
  - If target FPG achieved or sufficient basal dose administered (0.4–0.8 units/kg/day), but HbA1c remains >7%, then address PPG levels.
  - If the patient is unable to reach or maintain HbA1c below 7% after 3–6 months, consider intensifying insulin therapy.

**PATIENT DISCUSSION**

- The importance of blood glucose self-monitoring
  - FPG levels provide information about appropriateness of basal insulin replacement
  - Change in blood glucose level between bedtime and the next morning can also assess appropriateness of basal insulin replacement (values should be similar)
- PPG levels provide information about the need for mealtime insulin coverage
  - Monitoring PPG will help build a picture of the relationship between food and glucose control

**INSULIN**

**PATIENT MANAGEMENT**

- Using basal insulin
  - Assess HbA1c and FPG levels at 3-monthly intervals to evaluate treatment effectiveness
  - Optimize basal insulin with appropriate titration

- Intensifying therapy from basal insulin [1,2]
  - Consider adding sequential bolus doses of rapid-acting insulin at mealtimes to help control PPG
  - Transition to pre-mix analogue twice daily
  - Refer to a specialist

  After any adjustments to treatment, review the patient’s logs to assess daytime or overnight blood glucose control.

**PATIENT DISCUSSION**

- What happens next?
  - Beta-cell dysfunction is progressive and changes to treatment, including different insulin options, may be required with time to ensure glycaemic control and prevent disease progression
  - HbA1c increases (>7%) are expected and should be managed accordingly, without implying patient fault
  - Basal replacement may be sufficient initially, but will eventually need to be supplemented by bolus (prandial/mealtime) coverage

- Basal insulin maintains blood glucose overnight (blood glucose 70–130 mg/dl from bedtime to morning)
- Bolus (prandial, rapid-acting) insulin limits rise in blood glucose after meals (post-prandial blood glucose <180 mg/dL)
- Discuss treatment intensification options with the patient well in advance of any changes
MANAGING WEIGHT

PATIENT MANAGEMENT

✓ Every kilo counts

While on once-daily basal insulin therapy, maintaining current weight or limiting any weight gain are acceptable objectives:

● Regularly reassess weight, diet and exercise goals
● Ensure that these are realistic and achievable
● When the patient reaches or achieves a goal, even if that goal is to maintain their weight, congratulate and encourage them

PATIENT DISCUSSION

Work with patients to reduce weight gain

Weight management

● Discuss any effects of insulin therapy on weight
● Acknowledge weight maintenance or weight loss as a valuable achievement

ENCOURAGEMENT AND SUPPORT

PATIENT MANAGEMENT

✓ Follow-up after insulin initiation

Keep in regular contact to ensure that the patient is monitoring their glucose, responding to treatment and not experiencing side effects or other treatment-related issues:

● First month
  – Weekly contact, perhaps with a nurse, as the patient gets used to using insulin
  – Try phone appointments or email updates if time is a problem
● Next 5 months
  – Monthly contact to ensure target is reached
  – Reassess HbA1c at 3 months and 6 months to ensure treatment is optimized

PATIENT DISCUSSION

Continue to support patients using all available tools

Patients can feel better taking insulin

have you noticed improvements in blood glucose, energy levels or sleep patterns?

● To improve blood glucose control during day or after meals:
  – Involve the patient in insulin dose adjustments and decisions
  – Suggest monitoring blood glucose 7 times a day or 3 days a month
  – Review blood glucose logs and help the patient identify and interpret blood glucose patterns
  – Discuss interaction between carbohydrate intake and PPG deviations
APPENDIX

Advice for patients to improve their diet
- http://www.diabetes.co.uk/diet-basics.html

Suggestions for patients to increase daily activity
- Use a pedometer
- Use the stairs whenever you can
- Walk to buy your lunch or do your errands
- Stand when talking on the phone
- Walk to your co-worker’s desk instead of calling or e-mailing them
- Walk instead of driving, or use public transport
- Walk after dinner instead of sitting and watching TV
- Swap restaurant dates for activity dates
- Do housework
- Be active – visit parks, museums, fresh food markets

This website is for a 13-week programme specially designed for patients with type 2 diabetes who want to improve their lifestyle: http://www.changingdiabetes.co.uk/website/content/healthier-lifestyle-programme.aspx

Eating disorder screener (ESP [34–37])
- Are you satisfied with your eating patterns? No = abnormal response
- Do you ever eat in secret? Yes = abnormal response
- Does your weight affect the way you feel about yourself? Yes = abnormal response
- Have any members of your family suffered with an eating disorder? Yes = abnormal response
- Do you currently suffer with or have you ever suffered in the past with an eating disorder? Yes = abnormal response

Depression screener (modified PHQ-9 questionnaire)
Over the last 2 weeks, how often have you been bothered by:
- Little interest or pleasure in doing things?
- Feeling down, depressed or hopeless?

Score responses as follows:
- Not at all: 0
- Several days: 1
- Over half the days: 2
- Nearly every day: 3

A total score of 3+ has the best trade-off between sensitivity and specificity for diagnosis of depression.
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