Should I Start Insulin?
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This booklet belongs to:
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Hello!

Thank you for using the “Should I Start Insulin?” patient decision aid.

This book is meant for you if you have type 2 diabetes, your blood sugar is not well controlled, and your doctor has advised you to start insulin.

This booklet will help you to make an informed choice about whether or not to start insulin, and to discuss this decision with your doctor. It contains information on diabetes and insulin, various treatment options besides insulin therapy, and a section on considering what is important to you.

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What are your concerns?

People with type 2 diabetes who are advised to start insulin may have many concerns such as:

- I am afraid of injections and pain.
- Insulin may damage my kidneys.
- I think using insulin is inconvenient.
- Do I have to use insulin for the rest of my life?
- I am afraid of my sugar getting too low (‘hypos’).

This booklet will help to address some of your concerns.
About insulin therapy

What is insulin?

Have you ever wondered what insulin is and where it comes from?

Insulin is a hormone produced by the body and it helps to remove sugar from the blood and store it in muscle and fat.

In diabetes, the blood sugar level is high because the body does not:
• produce enough insulin
• respond to insulin properly

Is your blood sugar controlled?

You can know your blood sugar control by checking your:
• blood sugar level
• HbA1c level

*(HbA1c tells you the blood sugar control in the past three months)*

| TARGET FOR BLOOD SUGAR CONTROL* |
|-------------------------------|-----------------|
| Fasting                       | 4.4 - 6.1 mmol/L|
| Non-fasting                   | 4.4 - 8.0 mmol/L|
| HbA1c                         | <6.5%           |

*The target blood sugar level varies from one person to another. Discuss with your doctor/nurse about your target level. (Adapted from Clinical Practice Guideline 2009, Ministry of Health, Malaysia)*

<table>
<thead>
<tr>
<th>Your latest HbA1c:</th>
<th></th>
</tr>
</thead>
</table>

| Your target HbA1c: |  |

What happens when your blood sugar is high?

Having high blood sugar affects you in both short-term and long-term ways. You may experience the following symptoms:
• Thirst
• Tiredness
• Pass urine more often
• Lose weight
• Have blurred vision
• Frequent skin and urine infections

In the long term, if the blood sugar is not well controlled, you may get complications such as:
• Blindness
• Heart attack
• Stroke
• Kidney failure
• Nerve damage
• Losing your toes or legs
Why do you need insulin?

The reason why the doctor has advised you to start insulin is because your blood sugar level remains high despite taking tablets and following a healthy diet and exercise. This is because your pancreas is not producing enough insulin. This may happen 5 to 10 years after diagnosis.

Diabetes tablets work by increasing the amount of insulin in the body. However, the tablets are not working for you because your body cannot produce enough insulin anymore. Therefore, you need insulin injections.

How do you start insulin?

It is important for you to understand more about the experience of using insulin before making a decision. Insulin is given by injection using an ‘insulin pen’. Insulin pens have fine needles. Most people experience very little pain with the injections.

For most people, one injection at night is all that is needed. You can set the insulin dose you require by turning a dial on the insulin pen. The insulin is injected into the skin of your abdomen or the outer part of your thigh.

Insulin therapy will fit into your daily routine. You will continue to take your tablets, control your diet and exercise regularly as before. You can travel with the insulin pen without needing special storage.
Does insulin have side effects?

Insulin may cause you to experience side effects. Two of the most common are 'hypos' and weight gain.

‘Hypos’ happen when you skip meals, are not eating enough or exercise too hard. You may feel dizzy, sweaty, cold, confused, shaky and weak. If this happens, you need to take something sweet such as sweets and sugary drinks. You can avoid ‘hypos’ by eating on time. If it happens often, inform your doctor and he will adjust the insulin dosage.

Sometimes you may gain weight with insulin. You can avoid this by cutting down your food intake especially carbohydrates and fats.

How do you monitor the blood sugar level?

If you are on insulin therapy, it is important for you to monitor your blood sugar level regularly. At the start of insulin treatment, you will need to check your blood sugar level 1 to 2 times a day. Normally you will need to check in the morning before you eat (fasting). The device to check your blood sugar level is called a glucometer and each test strip costs RM1 - RM2.

To make a decision, you may consider these options:
What are your choices?

- Do nothing
- Follow stricter diet and exercise programme
- Add another type of diabetes tablet
  *This is not applicable to you if you are already taking 3 or 4 types (maximum number) of diabetes tablets.
- Start insulin injection
- Start another type of injection (non-insulin)
- Use alternative treatment (e.g. supplements, herbs and traditional medicine)
## What are the pros and cons of the treatment options?

<table>
<thead>
<tr>
<th></th>
<th>HbA1c</th>
<th>Diabetes complications</th>
<th>Diabetes symptoms</th>
<th>Hypoglycemia</th>
<th>Pain</th>
<th>Cost</th>
<th>Weight change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Do nothing</strong></td>
<td>No change or increase</td>
<td>May develop or worsen the complications</td>
<td>Will remain the same or get worse</td>
<td>Unknown</td>
<td>No</td>
<td>No added cost</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>Follow stricter diet and exercise programme</strong></td>
<td>No change or decrease</td>
<td>May prevent or slow down the progression</td>
<td>May improve</td>
<td>Unknown</td>
<td>No</td>
<td>No added cost</td>
<td>No change or decrease</td>
</tr>
<tr>
<td><strong>Start insulin injection</strong></td>
<td>Decrease by about 2%</td>
<td>Prevent or slow down the progression</td>
<td>Will improve</td>
<td>2 to 6 out of 10 people may have hypo; 4 to 8 may not</td>
<td>Yes</td>
<td>Between RM80 to RM190 / month (for 10 unit / day)</td>
<td>May put on weight by 1 to 2 kg</td>
</tr>
<tr>
<td><strong>Add another type of diabetes tablet</strong></td>
<td>Depends on the type of tablet – decrease from 0.5 to 1.5%</td>
<td>May prevent or slow down the progression</td>
<td>May improve</td>
<td>1 to 2 out of 10 people may have hypo; 8 to 9 may not</td>
<td>No</td>
<td>Between RM120 to RM240 / month</td>
<td>May put on weight by 0.5 to 3 kg</td>
</tr>
<tr>
<td><strong>Start another type of injection (non-insulin)</strong></td>
<td>Decrease from 0.5 to 1%</td>
<td>May prevent or slow down the progression</td>
<td>May improve</td>
<td>2 to 3 out of 10 people may have hypo; 7 to 8 may not</td>
<td>Yes</td>
<td>RM550 to RM600 / pen</td>
<td>Weight loss by 1 to 2 kg</td>
</tr>
<tr>
<td><strong>Use alternative treatment</strong></td>
<td>No evidence</td>
<td>Lack of evidence</td>
<td>Lack of evidence</td>
<td>Lack of evidence</td>
<td>No</td>
<td>Varies</td>
<td>Lack of evidence</td>
</tr>
</tbody>
</table>

- **Hypoglycemia:** May improve or not.
- **Pain:** No or may develop.
- **Cost:** Between RM80 to RM190 / month (for 10 unit / day).
- **Weight change:** May put on weight by 1 to 2 kg or may lose weight by 1 to 2 kg.
Do you know enough about the treatment options?

Now you have gone through the facts, please answer the following questions to find out how much you understand about the treatment options.

Please choose ONE appropriate answer from the list below:
A. Do nothing
B. Follow stricter diet and exercise programme
C. Start insulin injection
D. Add another type of diabetes tablet
E. Start another type of injection (non-insulin)
F. Use alternative treatment

Questions:

1. Which treatment option may improve the blood sugar level the most?

2. Which treatment option is the most effective in lowering diabetes complications?

3. Which treatment option may cause the most ‘hypos’ (low blood sugar)?

4. Which treatment option may cause the most weight gain?

Besides knowing the facts, people who are considering insulin therapy need to think about what is important to them before making a decision.

Please tick what is important to you. You can choose more than one.
I want to avoid:
- injections
- side effects ('hypos' or weight gain)
- insulin interfering with my lifestyle

I want to:
- be able to control my blood sugar
- lower my chance of getting complications
- reduce my diabetes symptoms

I am concerned:
- about being addicted to insulin
- whether insulin is halal
- whether I really need insulin at this stage
- that my diabetes might get worse after starting insulin
- about the cost of insulin treatment
- how other people will think of me using insulin
- that my family may not agree with me starting insulin
Do you need more support?

It is important that you consider what other information and support you need before making a decision. Please tick the appropriate boxes.

- Do you know enough about the pros and cons of each option to make a choice?
  - Yes
  - No

- Are you clear about which pros and cons are most important to you?
  - Yes
  - No

- Do you have enough support and advice from your doctor or nurse to make a choice?
  - Yes
  - No

- Do you have enough support from your family to make a choice?
  - Yes
  - No
What is your decision?

Now that you have learned about the pros and cons of each treatment option and know what is important to you, are you ready to make a decision about starting insulin?

Yes, I am ready

If you are ready to make a decision, which choice do you prefer?

- Do nothing
- Follow stricter diet and exercise programme
- Start insulin injection
- Add another type of diabetes tablet
- Start another type of injection (non-insulin)
- Use alternative treatment

No, I am not ready

If you are not ready, you can come back later and discuss with your doctor or nurse about your decision.

This decision aid is not meant to replace the consultation. Please discuss your option(s) with your doctor or nurse.

Thank you for using this booklet. We hope you found it helpful.
Your personal notes