Diabetes Essential Skills Kit

Essential Skills Profiles

Project READ Literacy Network

Ontario Trillium Foundation / Fondation Trillium de l'Ontario

Funded by: Ontario Trillium Foundation
The Ontario Trillium Foundation is an agency of the Government of Ontario

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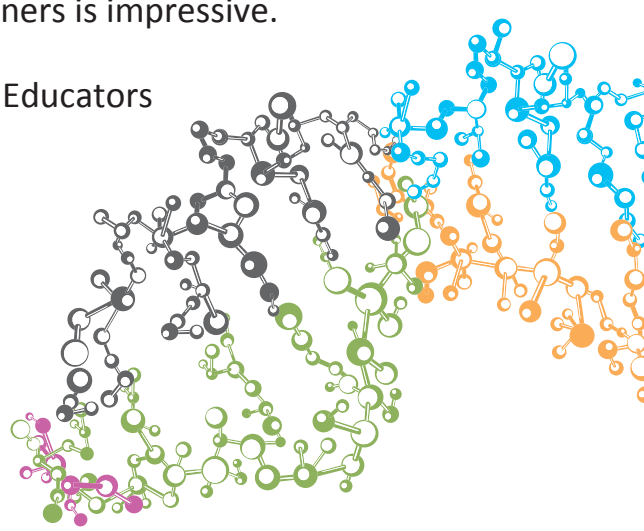
- Melissa Hallock, Registered Nurse
- Melissa Murray, Registered Dietitian
- Angela Puim, Pharmacist
- Nancy Raymond Registered Nurse
- Karen Reitzel, Registered Dietitian
- Krista Steinmann, Chiropodist
- Janet Storey, Pharmacy Assistant



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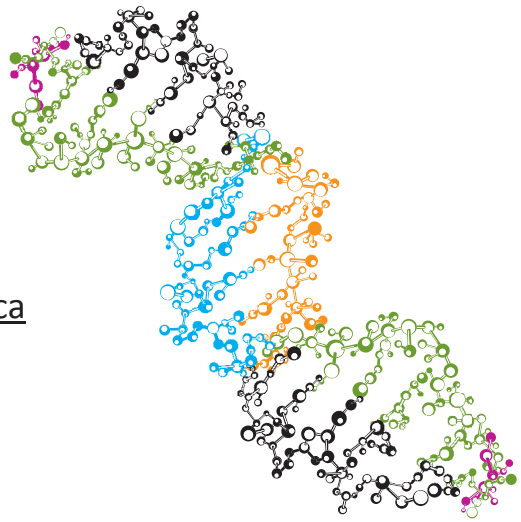
Thank you everyone,

Lisa McArthur, Project Consultant and Health Literacy Lead



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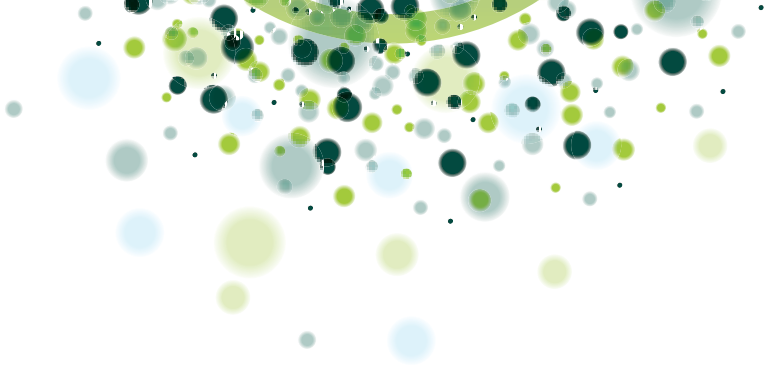


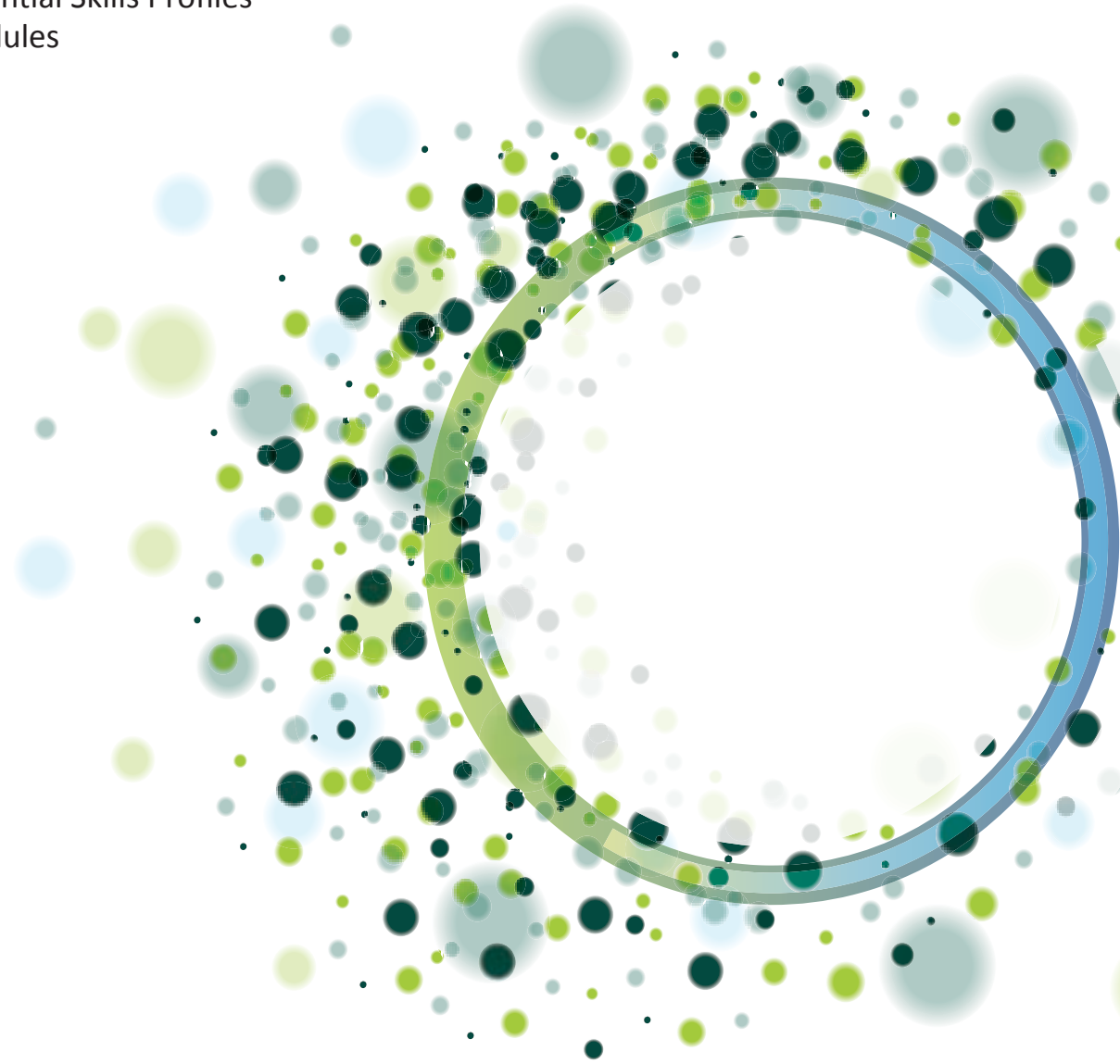
Essential Skills for Chronic Disease Management Series
The Diabetes Essential Skills Kit (DESK)

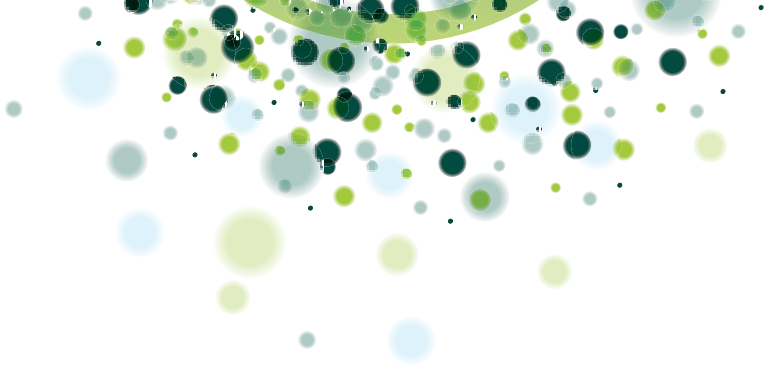
Introduction

Health and education research continue to show links between low literacy and poor health outcomes. As patients develop increasingly complex health issues and as chronic disease management and prevention become factors of daily life, many Canadians struggle to effectively self-manage their own health because their literacy levels are a barrier.

This project created resources that enable Health Practitioners and Literacy Practitioners to work together to with patients and learners identify barriers, develop skills and improve health outcomes. These resources are the **Diabetes Essential Skills Kit.** They include

- Diabetes Essential Skills Profiles
- Learning Modules



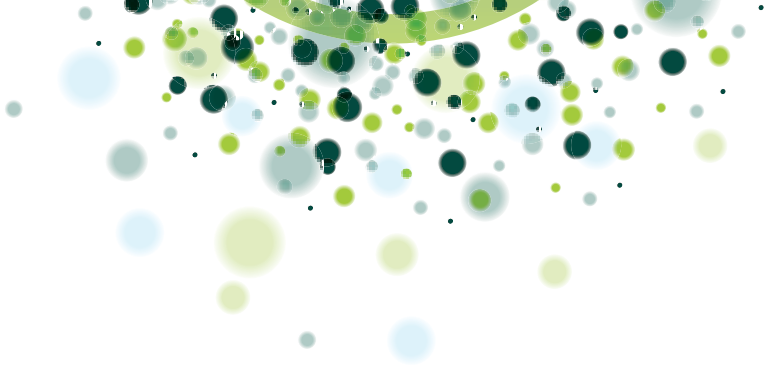


Introduction to the Diabetes Essential Skills Profiles

The Diabetes Essential Skills Tool Kit includes 15 Essential Skills Profiles that reflect the tasks that individuals living with diabetes have to perform on a regular basis.

The profiles are separated into 3 groups.

Understanding Profiles	Managing Profiles	Complications Profiles
These profiles describe tasks that learners must use to understand a particular type of diabetes. Learners may start with one profile to understand the current status of their disease but may find other profiles useful as their disease progresses.	These profiles describe the tasks that individuals perform when managing different aspects of their disease. Some individuals will need to review all the profiles. Some individuals will only need to review 2 or 3 profiles. All individuals will need to review Managing Diabetes with a Health Diet and Managing Diabetes with Physical Activity.	These profiles describe the tasks that individuals perform when they are experiencing complications due to diabetes. Some individuals will not need to review these profiles at all depending on their health status. Other individuals will review these profiles as part of their continuous learning and health prevention.
Understanding Pre-Diabetes	Managing Diabetes with a Healthy Diet	Understanding and Managing Foot Complications
Understanding Type 1 Diabetes	Managing Diabetes with Physical Activity	Understanding and Managing Eye Complications
Understanding Type 2 Diabetes	Managing and Measuring Blood Glucose Levels	Understanding and Managing Kidney Complications
Understanding Gestational Diabetes	Managing Blood Pressure and Cholesterol	
	Managing Diabetes with Oral Medication	
	Managing Diabetes with One Type of Insulin	
	Managing Diabetes with Two Types of Insulin	
	Managing Diabetes with an Insulin Pump	



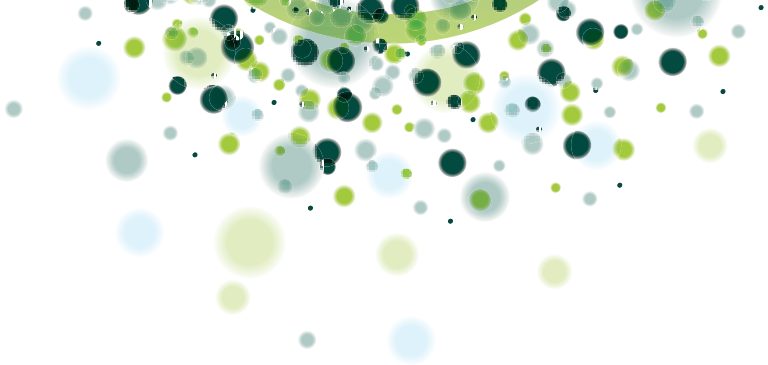
Using the Diabetes Essential Skills Profiles

The Diabetes Essential Skills Profiles can be used like any other Essential Skills Profile. They can be used to

- Help patients or health practitioners identify which skills are a barrier to the patient's health
- Help learners and literacy practitioners choose learning activities to support skill development
- Inform health practitioners of daily diabetes management tasks that could be simplified
- Inform literacy practitioners of the complexity of diabetes management tasks

There are many other ways that the profiles could be used for organizational development, policy decision making and professional training and development.

We will look at 2 examples of how the profiles could be used by literacy practitioners and health practitioners.



Example 1

How the Diabetes Essential Skills Profiles could be used by a learner and Literacy Practitioner

A learner who participates in a Literacy and Basic Skills (LBS) classroom tells you that they have just been diagnosed with diabetes. They are concerned that they do not have the skills to properly manage their disease.

Literacy Practitioners are not responsible for providing health information. That responsibility should be left up to medical professionals. The Literacy Practitioner can, however, use some of the Diabetes Essential Skills Profiles to show the learner which Essential Skills they will need to use and how often. The practitioner will build a Personal Diabetes Essential Skills Kit for the learner.

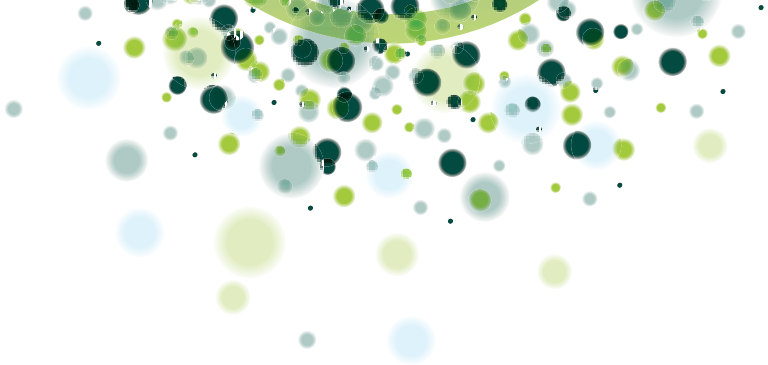
How to build a Personal Diabetes Essential Skills Kit

Step 1: Get more information

Ask the learner

- What kind of diabetes do you have?
- How do you have to manage or treat your diabetes?

The learner says that they have Type 2 Diabetes and they have just been given some pills for their blood pressure and blood sugar. They will be going to a diabetes education centre to meet with a nurse or a dietitian soon to talk about their diet and exercise. They don't test their blood sugar all the time.



Step 2: Choose Profiles

From this small amount of information, you can start choosing profiles that are a good match for this learner.

1. Start with an *Understanding* Profile.
   - Choose the **Understanding Type 2 Diabetes** profile

2. Then choose a few *Managing* Profiles. All individuals living with any kind of diabetes must monitor their diet and exercise to varying degrees. Always include these two profiles in the Personal Diabetes Essential Skills Kit
   - **Managing Diabetes with a Healthy Diet**
   - **Managing Diabetes with Physical Activity**

This learner says they are taking pills for blood pressure and blood sugar so you can also choose

- **Managing Blood Pressure and Cholesterol**
- **Managing Diabetes with Oral Medication**

These 5 profiles will provide the learner and the practitioner with descriptions of the types of tasks and the level of complexity that the learner will have to start performing.

3. Add more profiles as needed. For example, if the learner meets with a nurse and dietitian and has been told to start testing their blood sugar daily, you can add the **Managing and Measuring Blood Glucose** profile to the learner's Personal Diabetes Essential Skills Kit. If the learner says they have heard that people living with diabetes go blind, use the **Managing and Understanding Eye Complications** profile for continuous learning

Other ways to use the Diabetes Essential Skills Profiles in an LBS Class

You can use the profiles to alleviate stress for the learner. Simply showing a learner that they already excel at some of the required Essential Skills that are needed for diabetes management, can reduce the learner's fear of the unknown.

You can use the profiles to identify other areas where the learner might have difficulties because of poor skills. For example, knowing that a learner has difficulties filling in or reading tables allows you to create or use classroom activities that support skill attainment in this specific area.

You can also use the profiles as a communication tool. If you and the learner have determined that there are literacy barriers that could prevent the learner from performing specific tasks that are in the profiles, you can highlight those areas and have the learner take the profile in to the diabetes education centre. Using the profile the learner will be able to more clearly communicate to their health provider, where they need additional help with their diabetes management.

Example 2

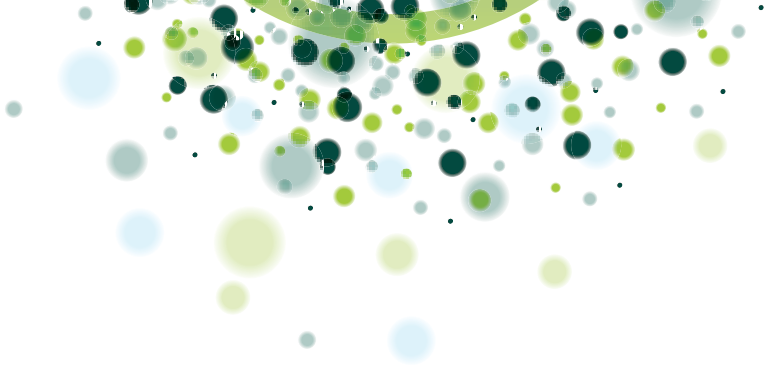
How the Diabetes Essential Skills Profiles could be used by a patient and Health Practitioner

A nurse and dietitian notice that one of their patients is struggling to control their blood sugar. The patient does not routinely fill in their diet and blood glucose log-books. When they do, the information does not match the glucometer readings or previous medical test results. The health practitioners check the **Managing and Measuring Blood Glucose** profile and notice that there are several tasks in the profile that the patient may not be able to perform independently.

A conversation and demonstration by the patient reveals that the patient understands how to use their glucometer correctly but they do not fill in the information properly into the log book.

A referral is made to an LBS class. The **Managing and Measuring Blood Glucose** profile is also sent to the LBS program with clear indications of the specific tasks that the learner is struggling to perform independently. The practitioners at the LBS program work with the patient/learner to develop independent skills in the specified area making sure that the skills are transferable to other contexts. In this example, the patient would learn how to fill in the appropriate information in their current glucometer log book but also other log books or tables they may have to use in the future.

The patient continues to get clinical support and education from health practitioners during the upgrading process. When the patient shows mastery of the document use skills, they are either discharged from the LBS program or are given the option to continue their work on other skill areas that are potential barriers to their health. The patient can also choose to pursue skills upgrading toward a different goal path.



Diabetes Essential Skills Kit

Profiles

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Diabetes

Essential Skills Kit

Understanding Profiles

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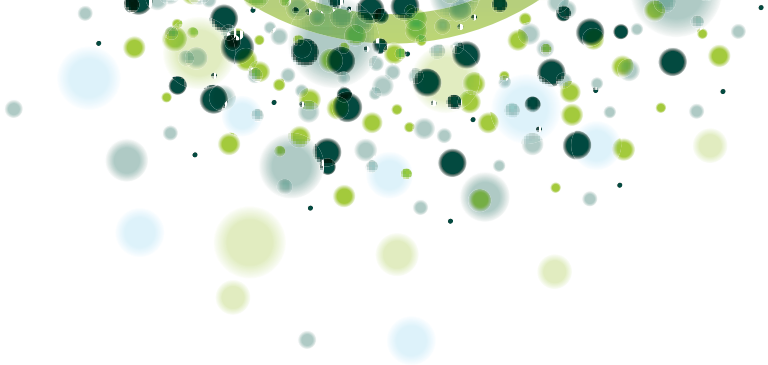

Understanding Pre-Diabetes Profile

Introduction

Understanding Pre-diabetes is an overview of the management, understanding and complications of the disease. Pre-diabetes may be treated with diet and physical activity to prevent developing Type 2 Diabetes. It is important to note that controlling diet and exercising play a significant role in the management of Pre-diabetes. Recording information related to the management of diabetes is critical in maintaining control of the disease and preventing further complications.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read and understand an introduction paper outlining that diabetes is controlled through diet, exercise and medication. Medication may be in pill form or insulin injection. **AN** Read and understand an introduction paper that outlines complications of diabetes. These complications may include: blindness, heart disease, foot ulcers or kidney problems and may begin to happen when you have Pre-diabetes. **AN** Read and understand an information paper that indicates as you age your pancreas ages. Your pancreas slows down and is not able to look after sugar as well as it used to. **AN** Read and understand a brochure that outlines testing blood sugar will help you understand the effects the changes in your lifestyle have on your pre-diabetic condition. **AN** Read and understand an introduction paper that states that blood sugar levels are most commonly tested using a lancet that punctures the skin at the tip of the finger. **AN** Read an information sheet to understand the risk factors. For example: being a member of a high risk population such as: Aboriginal, Hispanic, or of Asian, South Asian or African descent; having a baby with a high birth weight in previous pregnancies; having a parent or sibling with diabetes; being over the age of 40. **AN**

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Level 2

Read and understand an introduction to Pre-diabetes which indicates that Pre-diabetes can happen without you knowing it. **AN**

Read and understand information that your health care team may include: your family doctor, diabetes specialists, nurses, dietitians, pharmacists, social workers, and foot, eye and kidney specialists. **AN**

Read and understand information from a brochure that you should be tested for pre-diabetes if you have other medical conditions such as high blood pressure, high levels of LDL cholesterol, or low levels of HDL cholesterol or are overweight. **AN**

Read and understand information from a brochure that a healthy weight will help your body use insulin properly. **AN**

Level 3

Read and understand an introduction to diabetes to understand that Pre-Diabetes occurs when the pancreas is not able to produce enough insulin or glucose builds up in the blood instead of being used for energy. **AN**

Read and understand an introduction that Pre-diabetes is a warning that blood glucose levels are high but not high enough to be diagnosed with Type 2 Diabetes. **AN**

Read and understand an information paper stating that Pre-diabetes, if properly treated with lifestyle choices such as physical activity and healthy eating can delay the onset of Type 2 Diabetes. **AN**

Read an introduction about stress and recognize that stress can directly affect blood glucose levels or prevent you from taking good care of yourself. **AN**

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Document Use

Level 1	Review and complete a Pre-diabetes assessment to determine if there is a risk of developing Type 2 Diabetes. **AN** Review and complete a screening tool outlining diet over a period of 6 months in order to understand healthy and non-healthy food choices. **Y** Review the list of signs that identify possible pre-diabetes. Some signs include: fatigue, extreme thirst, hunger, or decrease in sexual function. **AN**
Level 2	Scan the list of complications that may happen if Pre-diabetes is not properly managed. Some complications include: blindness, heart disease, kidney damage or foot ulcers. **AN** Scan the list of risk factors for Type 2 Diabetes including being overweight, health complications with eyes or nerves, and high blood pressure. **AN** Record and compare blood sugar levels to the target levels each time your blood is tested. **M** Scan a journal or log book to locate where to record blood sugar levels, symptoms and body weight when testing blood glucose. For example, testing may occur at mealtimes or when experiencing hypoglycemia. **AN** Scan a document to locate and understand the symptoms of low blood sugar (hypoglycemia), such as shaking, hunger, confusion, blurred vision and weakness. **AN**
Level 3	Review and understand that the "ABCs" for diabetes include; A - A1C is a blood test to determine the average blood glucose level for the last 3 months; B - Blood Pressure and C – Cholesterol. All 3 factors can have an effect on diabetes. **AN** Read documents that outline the steps to managing Pre-diabetes. The steps may include blood glucose monitoring, physical activity, healthy eating, weight management, medication, lifestyle management and quitting smoking. **AN**

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Numeracy

Level 1

Follow a regular schedule of time for eating meals and snacks to maintain blood sugar levels. For example; eat breakfast everyday between 7am and 9 am, have lunch around 12 noon and dinner around 5 pm. **AN** Scheduling, Budgeting and Accounting

Use the paper ruler (cm or inches) provided to measure the size of the wrist to get the measurement for a Medic Alert Bracelet. **AN** Measurement and Calculation

Compare and understand the levels of blood sugar for normal and Pre-diabetes. **AN** Data Analysis

Monitor the number of hours required to fast before a glucose tolerance test or the A1C test. Approximately 8 hours of fasting is suggested. **AN** Scheduling, Budgeting and Accounting

Schedule an A1C test as recommended by the health practitioner. This test is usually done every three months. **AN** Scheduling, Budgeting and Accounting

Measure your stress level using a scale of 1 to 10 when your blood glucose test indicates your blood sugar is high. **AN** Measurement and Calculation

Level 2

Determine and calculate the cost of becoming a member of Medic Alert versus purchasing the bracelet only. Determine the cost of purchasing an alert bracelet from another source. **AN** Data Analysis

Level 3

Compare your stress levels with your blood glucose levels over a two week period to identity any patterns. **AN** Data Analysis

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Writing

Level 1	Complete a Pre-diabetes assessment to determine if there is a risk of developing Type 2 Diabetes. **Y** Complete a screening tool outlining diet over a period of 6 months in order to understand healthy and non-healthy food choices. **Y** Complete handouts received at a workshop given by a dietitian/educator to record and determine if your current diet is high in calories, fat, sugar and salt. **AN**
Level 2	Record blood sugar levels, symptoms and body weight when testing blood glucose levels using a log book or journal. **AN**

Oral Communication

Level 1	Ask and respond to questions in a workshop regarding food choices when reviewing the Nutrition Facts Labels. **AN**
Level 3	Information about Pre-Diabetes can be gathered from speaking with the following healthcare practitioners: family doctor, nurses, dietitian, pharmacist, eye kidney or foot specialists and diabetes specialists. Conversations may be in person or over the phone. **AN**

Computer Use

Level 1	Use the internet to find recipes suitable for people living with diabetes. For example, brand name food companies have many different recipes available for downloading. **AN**
Level 2	Use the internet to research Pre-diabetes signs, symptoms and treatment. **AN**

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Thinking Skills

Level 1

Decide to follow a healthy diet to manage Pre-diabetes. **D** Decision Making

Assess the recipes used most often for ingredients that can be reduced, eliminated or substituted. For example: use a substitute for sugar or can this meal be baked instead of being fried. **AN** Problem Solving

Be aware of and request information from a health care practitioner, search the internet or read brochures about diabetes care. For example; how often should cholesterol, blood pressure and eyes be tested; what is the target level for the A1C test? **AN** Finding Information

Locate information about the risk factors for Pre-diabetes using the internet, or talking with a health care practitioner. For example: the internet can provide a broad range of information and the health care practitioner can provide more detailed information. **AN** Finding Information

Find information on food labels and compare to Nutrient Content Claim document for meanings. **AN** Finding Information

Decide to eat something healthy when eating out. For example: have a salad rather than French fries or choose seafood cocktail rather than garlic bread. **D** Critical Thinking

Level 2

Determine how eating foods or consuming alcohol high in sugar will impact blood glucose levels and the meals that you will be eating that day. For example: if you are attending a birthday party and may be having cake and/or a drink, do you have to adjust the other meals, or medication for that day? **D** Decision Making

Using your diet to control your diabetes may mean having the ability to make changes throughout the day based on time. For example: if your lunch break at work is delayed, you may need to have a snack until you can have lunch. **D** Job Task Planning and Organizing

Refer to fact sheets on fibre to find websites that give more information vegetables high in fibre and recipes that include high fibre content such as legumes (beans). **AN** Finding Information

Assess and understand that hypoglycemia occurs when the person living with diabetes does not eat enough or does not eat the recommended foods. This may cause blood sugar levels to be too low. **AN** Critical Thinking

Evaluate and understand that the symptoms you are experiencing may be a sign of hypoglycemia. For example: shaking, hunger, confusion, blurred vision and weakness. **AN** Critical Thinking

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Level 3	Some people living with diabetes may experience fluctuations in blood glucose levels when first diagnosed even though the doctor has prescribed a plan. When this occurs, the patient will have to contact the doctor to make the necessary adjustments to their plan. The person living with diabetes will have to learn to record the specific details of their meals, activity and lifestyle for the plan to be adjusted properly. **AN** Problem Solving Identify a pattern with your stress level and blood glucose level over a period of time. Begin to implement strategies to reduce stress. For example: breathing exercises, relaxation therapy, exercising or replacing bad thoughts with good thoughts. **AN** Problem solving Consider the following questions when testing blood sugar at different times throughout the day: "Has your blood glucose returned to target since the last meal?"; "Has it been too long since you had something to eat?" **D** Critical Thinking
	Level does not apply Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include: nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with diabetes educators and exercise therapists to set goals for both healthy eating and maintaining or reducing weight. This will help you manage your diabetes. **AN** Work with support groups and counsellors to learn techniques for coping with stress related to diabetes. **AN**

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Level 3

Once diagnosed with pre-diabetes referrals to other health care practitioners may occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Work with your family members or co-workers so that they understand and know how to help support you when you are trying to change your eating and exercise habits. **AN**

Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

Continuous Learning for people living with diabetes is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

Learn through workshops and online research the risk and management of Pre-diabetes, including ways to delay or prevent the onset of Type 2 Diabetes. Learning can also occur through the use of the internet, talking with health care providers and reading print material. **AN**N

People living with diabetes learn by oral and/or illustrated explanations about the effect that glucose has on the pancreas. **AN**

Read “Diabetes, an Introduction” to learn more about the disease, symptoms, and complications. **AN**

Draw on the experience of someone in the family who has had diabetes. **AN**

Attend several workshops to learn about: carbohydrates, nutrition claims, comparing food labels, understanding the percent Daily Value on food labels and words on ingredient lists. **AN**

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Understanding Type 1 Diabetes Profile

Introduction

Understanding Type 1 Diabetes is an overview of the management, understanding and complications of the disease. Type 1 Diabetes must be managed through the use of insulin. Although not explicit in the profile this affects both children and adults. Parents of children living with Type 1 Diabetes will need to understand the risks and complications as well at the treatment of the disease on behalf of their children.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read and understand an information sheet that states that the treatment for Type 1 Diabetes is insulin. **AN** Read and understand an information sheet that indicates Type 1 Diabetes is not preventable and is not caused by eating too much sugar. **AN** Read and understand a brochure that states using fingertips for testing blood glucose gives the most accurate reading. **AN** Read and understand an information sheet that indicates insulin has a shelf life and cannot be used after 28 days once it has been opened. **AN**
Level 3	Read "Diabetes, an Introduction" to understand that Type 1 Diabetes occurs when the pancreas is not able to produce insulin. Type 1 Diabetes is a lifelong condition. **AN** Read an introduction about stress and recognize that stress can directly affect blood glucose levels or prevent you from taking good care of yourself. **AN**

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Document Use

Level 2

Scan the list of signs and symptoms that identify Type 1 Diabetes. The symptoms may include: unusual thirst, blurred vision, weight change or frequent urination. **AN**

Scan a list of complications that can happen if diabetes is not treated or properly managed. Some complications include blindness, heart disease, kidney damage or foot ulcers. **AN**

Review the steps necessary to manage Type 1 Diabetes. The steps include but are not limited to: taking insulin prescribed by the doctor; checking blood glucose levels regularly; maintaining a balanced meal plan; taking care of your feet and not smoking are some examples. **AN**

Scan the suggested hints for fingertip testing. For example: don't use rubbing alcohol; get the blood flowing; experiment with different devices and lancets; use lancets only once; try a shallower puncture; pick your site and use lotion. **AN**

Level 3

Scan an insulin logbook to locate the type of information requested. For example: the name of the insulin, the amount or dosage, the time it was injected, how long the insulin worked and when the insulin was most effective. **D**

Numeracy

Level 1

Use a calendar to calculate the number of days insulin has been open. Understand that insulin has a shelf life and cannot be used after 28 days if it has been opened. **M** Scheduling, Budgeting and Accounting

Monitor the number of hours required to fast before a glucose tolerance test or the A1C test. Approximately 8 hours of fasting is suggested.
AN Scheduling, Budgeting and Accounting

Measure your stress level using a scale of 1 to 10 when your blood glucose test indicates your blood sugar is high. **AN** Measurement and Calculation

Using a chart that indicates target levels, compare blood sugar levels to the intended levels each time blood glucose is tested. **D** Data Analysis

Use the paper ruler (cm or inches) provided to measure the size of the wrist to get the measurement for a Medic Alert Bracelet. **AN** Measurement and Calculation

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Level 2	Determine and calculate the cost of becoming a member of Medic Alert versus purchasing the bracelet only. Determine the cost of purchasing an alert bracelet from another source. **AN** Data Analysis
Level 3	Compare your stress level with your blood glucose level over a two week period in order to identify any patterns. **AN** Data Analysis Record of the names of the insulin, amount or dosage, and what time/s you injected the insulin, how long the insulin worked and when the insulin was most effective in order to identify and analyze the patterns. **D** Data Analysis

Writing

Level 1	Complete a screening tool outlining diet over a period of 6 months in order to understand healthy and non-healthy food choices. **Y**
Level 2	Record information about insulin used throughout the day including the time, name of insulin, amounts of insulin, how long it worked and when it was most effective. **D** Complete a registration form or medical history when attending diabetes education program or a specialist appointment. Required information may include an up-to-date list of medications. **AN** Record blood sugar levels, symptoms and body weight when testing blood glucose levels using a log book or journal. **AN**

Oral Communication

Level 1	Ask and respond to questions in a workshop regarding food choices when reviewing the Nutrition Facts Labels. **AN**
Level 3	Information about Type 1 Diabetes can be gathered from speaking with the following health care practitioners: family doctor, nurses, dietitian, pharmacist, eye kidney or foot specialists and diabetes specialists. Conversations may be in person or over the phone. **AN** Discuss the lifestyle and management of Type 1 Diabetes with support groups, friends and family. **AN**

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Computer Use

Level 2

Use the internet to research Type 1 Diabetes signs, symptoms and treatment. **AN**

Use the internet to locate resources such as a 24 hour pharmacies, after hours clinic, or homecare. **AN**

Thinking Skills

Level 1

Decide to follow a healthy diet to manage Type 2 Diabetes. **D** Decision Making

Be aware of and request information from a health care practitioner, search the internet or read brochures about diabetes care. For example; how often should cholesterol, blood pressure and eyes be tested; what is the target level for the A1C test? **AN** Finding Information

If insulin has been opened for longer than 28 days you will have to obtain a new supply of insulin. **M** Problem Solving

Locate information about Type 2 Diabetes using the internet, or talking with a health care practitioner. For example: the internet can provide a broad range of information and the health care practitioner can provide more detailed information. **AN** Finding Information

Level 2

Assess and decide on the specific health care practitioner to contact in order to discuss information about Type 1 Diabetes and complications. **AN** Decision Making

Assess and understand that the term "injection" is referring to the use of insulin and that injection is done through the use of a syringe, pen or a pump. **AN** Critical Thinking

Assess and understand that blood sugar levels are tested using a lancet that punctures the skin usually at the fingertip. **AN** Critical Thinking

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Level 3	Identify a pattern with your stress level and blood glucose level over a period of time. Begin to implement strategies to reduce stress. For example: breathing exercises, relaxation therapy, exercising or replacing bad thoughts with good thoughts. **AN** Problem Solving Some people living with diabetes may experience fluctuations in blood glucose levels when first diagnosed even though the doctor has prescribed a plan. When this occurs the person living with diabetes will have to contact the doctor to make the necessary adjustments to their plan. The person living with diabetes will have to learn to record the specific details of their meals, activity and lifestyle for the plan to be adjusted correctly. **AN** Problem Solving Parents of children living with diabetes must decide on the how to treat the disease. This may mean giving the child long acting insulin or the parent going to school during the day to administer insulin, since most schools will not do this. **AN** Decision Making
	Level does not apply Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include: nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with support groups and counsellors to learn techniques for coping with the stress related to diabetes. **AN** Work with diabetes educators and exercise therapists to set goals for both healthy eating and maintaining or reducing weight. This will help you manage your diabetes. **AN**

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Level 3

Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Work with your family members or co-workers so that they understand and know how to help support you when you are trying to change your eating and exercise habits. **AN**

Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

Learn through a workshop the risk and management of Type 2 Diabetes, including ways to delay or prevent complications or the progression of the disease. Learning can also occur through the use of the internet, talking with health care providers and reading print material. **AN**

People living with diabetes learn by oral and/or illustrated explanations about the effect that glucose has on the pancreas. **AN**

Read “Diabetes, an Introduction” to learn more about the disease, symptoms, and complications. **AN**

Draw on the experience of someone in the family who has had diabetes. **AN**

Attend several workshops to learn about: carbohydrates, nutrition claims, comparing food labels, understanding the percent Daily Value on food labels and words on ingredient lists. **AN**

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Understanding Type 2 Diabetes Profile

Introduction

Understanding Type 2 Diabetes is an overview of the management, understanding and complications of the disease. Type 2 Diabetes may be treated with diet, oral medication or insulin. It is important to note that controlling diet, exercising and monitoring blood glucose plays a significant role in the management of Type 2 Diabetes. Recording information related to the management of diabetes is critical in maintaining control of the disease.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2

Read and understand an information sheet that indicates diabetes is controlled through diet, exercise and medication. This may be in pill form or insulin injection. **AN**

Read and understand an information sheet that outlines complications of diabetes and may include blindness, heart disease, kidney or foot ulcers. **AN**

Read and understand a brochure that states using fingertips for testing blood glucose gives the most accurate reading. **AN**

Read and understand an information sheet that indicates the term "injection" refers to the use of insulin and that injection is done through the use of a syringe, pen or a pump. **AN**

Read and understand an information sheet that outlines blood sugar levels are most commonly tested using a lancet that punctures the skin at the tip of the finger. **AN**

Read and understand a brochure that outlines the health care team which may include: the family doctor, nurse, dietitian, pharmacist, foot, eye, kidney specialists or diabetes specialist. **AN**

Read an information sheet to understand the risk factors. For example: being a member of a high risk population such as: Aboriginal, Hispanic, or of Asian, South Asian or African descent; having a baby with a high birth weight in previous pregnancies; having a parent or sibling with diabetes; being over the age of 40. **AN**

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Level 3	Read "Diabetes, an Introduction" to understand that Type 2 Diabetes occurs when the pancreas is not able to produce enough insulin or that glucose builds up in the blood instead of being used for energy. **AN** Read an introduction to understand that Type 2 Diabetes happens most often with adults. **AN** Read an introduction to understand that people living with Type 2 Diabetes can manage their diabetes with lifestyle choices such as being physically active and eating a health diet. **AN** Read an introduction about stress and recognize that stress can directly affect blood glucose levels or prevent you from taking good care of yourself. **AN**

Document Use

Level 1	Review and complete a screening tool outlining diet over a period of 6 months in order to understand healthy and non-healthy food choices. **Y**
Level 2	Scan a list of complications that can happen if diabetes is not treated or properly managed. Some complications include blindness, heart disease, kidney damage or foot ulcers. **AN** Scan a list of risk factors for Type 2 Diabetes. Risk factors include: being overweight; health complications with eyes or nerves and high blood pressure or cholesterol. **AN** Scan a journal or log book to locate where to record blood sugar levels, symptoms and body weight when testing blood glucose. For example, testing may occur at mealtimes or when experiencing hypoglycemia. **M** Scan a document to locate and understand the symptoms of low blood sugar (hypoglycemia), such as shaking, hunger, confusion, blurred vision and weakness. **AN** Record and compare blood sugar levels to the target levels each time you test your blood using a log book or journal. **AN**
Level 3	Review and understand that the "ABCs" for diabetes include; A - A1C is a blood test to determine the average blood glucose level for the last 3 months; B - Blood Pressure and C – Cholesterol. All 3 factors can have an effect on diabetes. **AN** Read documents that outline the steps to managing Type 2 Diabetes. The steps may include blood glucose monitoring, physical activity, healthy eating, weight management, medication, lifestyle management and quitting smoking. **AN**

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Numeracy

Level 1

Follow a regular schedule of time for eating meals and snacks to maintain blood sugar levels. For example; eat breakfast everyday between 7am and 9 am, have lunch around 12 noon and dinner around 5 pm. **D** Scheduling, Budgeting and Accounting

Use the paper ruler (cm or inches) provided to measure the size of the wrist to get the measurement for a Medic Alert Bracelet. **AN** Measurement and Calculation

Compare and understand the levels of blood sugar for normal and Type 2 Diabetes. **AN** Data Analysis

Schedule an A1C test as recommended by the health practitioner. This test is usually done every three months. **AN** Scheduling, Budgeting and Accounting

Monitor the number of hours required to fast before a glucose tolerance test or the A1C test. Approximately 8 hours of fasting is suggested. **AN** Scheduling, Budgeting and Accounting

Measure your stress level using a scale of 1 to 10 when your blood glucose test indicates your blood sugar is high. **AN** Measurement and Calculation

Level 2

Determine and calculate the cost of becoming a member of Medic Alert versus purchasing the bracelet only. Determine the cost of purchasing an alert bracelet from another source. **AN** Data Analysis

Level 3

Compare your stress levels with your blood glucose levels over a two week period to identity any patterns. **AN** Data Analysis

Writing

Level 1

Complete a screening tool outlining diet over a period of 6 months in order to understand healthy and non-healthy food choices. **Y**

Level 2

Record blood sugar levels, symptoms and body weight when testing blood glucose levels using a log book or journal. **W**

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Oral Communication

Level 1	Ask and respond to questions in a workshop regarding food choices when reviewing the Nutrition Facts Labels. **AN**
Level 3	Information about Type 2 Diabetes can be gathered from speaking with the following health care practitioners: family doctor, nurses, dietitian, pharmacist, eye kidney or foot specialists and diabetes specialists. Conversations may be in person or over the phone. **AN** Discuss the lifestyle and management of Type 2 Diabetes with support groups, friends and family. **AN**

Computer Use

Level 2	Use the internet to research Type 2 Diabetes signs, symptoms and treatment. **AN**

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Thinking Skills

Level 1

Decide to follow a healthy diet to manage Type 2 Diabetes. **D** Decision Making

Be aware of and request information from a health care practitioner, search the internet or read brochures about diabetes care. For example; how often should cholesterol, blood pressure and eyes be tested; what is the target level for the A1C test? **AN** Finding Information

Locate information about the risk factors for Type 2 Diabetes using the internet, or talking with a health care practitioner. For example: the internet can provide a broad range of information and the health care practitioner can provide more detailed information. **AN** Finding Information

Level 2

Consider and understand that some prescribed insulin may cause hypoglycemia (low blood sugar). **AN** Critical Thinking

Assess and understand that hypoglycemia occurs when the person living with diabetes does not eat enough or does not eat the recommended foods. This may cause blood sugar levels to be too low. **AN** Critical Thinking

Evaluate and understand that the symptoms you are experiencing may be a sign of hypoglycemia. For example: shaking, hunger, confusion, blurred vision and weakness. **AN** Critical Thinking

Level 3

Decide to contact a health care practitioner when experiencing symptoms of Type 2 Diabetes. The symptoms may include: side effects from medication; continued thirst or trouble with maintaining a healthy weight. **AN** Decision Making

Decide to contact a health care practitioner when you think you may be experiencing complications of diabetes. These complications may include: problems with your eyes; foot infections; numbness or ketosis. **AN** Decision Making

Some people living with diabetes may experience fluctuations in blood glucose levels when first diagnosed even though the doctor has prescribed a plan. When this occurs the person living with diabetes will have to contact the doctor to make the necessary adjustments to their plan. The person living with diabetes will have to learn to record the specific details of their meals, activity and lifestyle for the plan to be adjusted correctly. **AN** Problem Solving

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Level 3	Identify a pattern with your stress level and blood glucose level over a period of time. Begin to implement strategies to reduce stress. For example: breathing exercises, relaxation therapy, exercising or replacing bad thoughts with good thoughts. **AN** Problem solving Consider the following questions when testing blood sugar at different times throughout the day: "Has your blood glucose returned to target since the last meal?"; "Has it been too long since you had something to eat?" **D** Critical Thinking
	Level does not apply Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include: nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with diabetes educators and exercise therapists to set goals for both healthy eating and maintaining or reducing weight. This will help you manage your diabetes. **AN** Work with support groups and counsellors to learn techniques for coping with the stress related to diabetes. **AN**
Level 3	Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN** Work with your family members or co-workers so that they understand and know how to help support you when you are trying to change your eating and exercise habits. **AN** Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

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Understanding Gestational Diabetes Profile

Introduction

Understanding Gestational Diabetes is an overview of the management, understanding and complications of the disease. Gestational Diabetes occurs during pregnancy and is a temporary condition. Having Gestational Diabetes can increase the risk of developing Type 2 Diabetes later in life. Gestational Diabetes does not mean that the baby will be born with diabetes.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read and understand a pamphlet indicating that using fingertips for testing blood glucose gives the most accurate reading. **AN** Read and understand from a document that blood sugar levels are tested using a lancet that punctures the skin at the fingertip. **AN** Read and understand a document that outlines that the term "injection" is referring to the use of insulin and that injection is done through the use of a syringe, pen or a pump. **AN** Read an information sheet to understand the risk factors. For example: being a member of a high risk population such as: Aboriginal, Hispanic, or of Asian, South Asian or African descent; having a baby with a high birth weight in previous pregnancies; having a parent or sibling with diabetes; being over the age of 40. **AN**

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Level 3	Read an introduction brochure to diabetes to understand that Gestational Diabetes is a temporary condition that happens when an individual is pregnant and that diabetes occurs when the pancreas is not able to produce insulin. **AN** Read an information brochure to understand that having had diabetes while pregnant increases the risk for the child and the mother for developing Pre-Diabetes or Type 2 Diabetes later in life. **AN** Read information from an introduction brochure to understand that having high blood sugar during pregnancy may be passed to the baby. This may increase the weight of the baby. **AN** Read information from an introduction brochure to understand that the baby will not be born with diabetes if the mother has had Gestational Diabetes. **OT** Read and understand information from an introduction brochure that stress can directly affect blood glucose levels and can prevent you from taking good care of yourself. **AN**

Document Use

Level 2	Review the documentation to understand the signs that a child may have diabetes. The signs include: going to the bathroom a lot, having very little energy or being thirsty all the time. **AN**
Level 3	Follow documentation on how to manage Gestational Diabetes. For example: follow a healthy diet; be physically active; maintain a normal pregnancy weight gain and test your blood glucose. **AN** Review documentation to determine how to follow a healthy lifestyle after having had gestational diabetes. **AN**

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Numeracy

Level 1

M Monitor the number of hours required to fast before a glucose tolerance test or the A1C test. Approximately 8 hours of fasting is suggested.
M Scheduling, Budgeting and Accounting

Plan to have blood sugar levels tested within 6 weeks to 6 months after giving birth to determine if you have Type 2 Diabetes. **Y** Scheduling, Budgeting and Accounting

Follow a daily schedule to check blood sugar levels during pregnancy.
D Scheduling, Budgeting and Accounting

Calculate the number of additional calories to include in your diet when breastfeeding. The mother requires additional nutrition and should increase the number of servings from the 4 food groups listed in the Canada Food Guide.
D Measurement and Calculation

Measure your stress level using a scale of 1 to 10 each time you test your blood glucose. **D** Measurement and Calculation

Monitor weight to track losses or gains during pregnancy. **M** Data Analysis

Level 2

Track post pregnancy weight. Weight loss should be approximately 1 to 2 lbs. per week. **W** Data Analysis

Level 3

Compare your stress level pattern with your blood glucose level over a two week period to identity any patterns. **M** Data Analysis

Writing

Level 1

Record information about insulin used throughout the day including the time, name of insulin, amounts of insulin, how long it worked and when it was most effective. **D**

Level 2

Record post pregnancy weight. Weight loss should be approximately 1 to 2 lbs. per week using a journal or log book. **W**

Write a list of questions about your diabetic condition to ask your health practitioner. For example, is the information obtained from the internet accurate? **AN**

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Oral Communication

Level 2

Be advised by the health practitioner that you should be tested for Gestational Diabetes between the 24th and 28th week of pregnancy. **Y**

Discuss with the health care practitioner the amount of weight that may be gained throughout the pregnancy. **AN**

Computer Use

Level 2

Use the internet to research Gestational Diabetes or Type 2 Diabetes signs, symptoms and treatment. **AN**

Use the internet to find support groups for Gestational Diabetes. Read about new developments, tips, recipes or reviews on diabetic medical supplies or equipment. Watch instructional videos for using diabetes equipment. **AN**

Thinking Skills

Level 1

Locate and validate information gathered through internet research about Gestational diabetes and the complications by talking to doctors, specialists, nurses, dietitians, pharmacists and diabetes educators. **AN** Finding Information

Level 2

Decide to add calories to your diet once the baby is born and you are breastfeeding. You will need to choose carbohydrates and proteins. These decisions will assist you in managing post gestational diabetes. **D** Decision Making

Assess your eating habits to ensure that both you and the baby are getting the daily nutrition required. For example: are you eating enough good carbohydrates and are you limiting the amount of fat you are eating? **D** Critical Thinking

Level 3

Once the baby is born the mother should decide on the feeding option for the baby. For example: breast feeding reduces the baby's risk of developing obesity, diabetes and other ailments. **AN** Decision Making

You have identified a pattern with your stress level and blood glucose level over a period of time. Begin to implement strategies to reduce stress. For example; breathing exercises, relaxation therapy, exercise or replace bad thoughts with good thoughts. **AN** Problem Solving

Level does not apply

Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

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Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with support groups, social workers and counsellors to learn techniques for coping with stress related to diabetes. **AN**
Level 3	Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN** Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

Learn about the risks of developing Type 2 Diabetes once the mother has had Gestational Diabetes. Learning can occur through searching the internet, talking to a health care practitioner or reading of material.

Read “Diabetes, an Introduction” to learn more about the disease, symptoms, and complications.

Draw on the experience of someone in the family who has had diabetes

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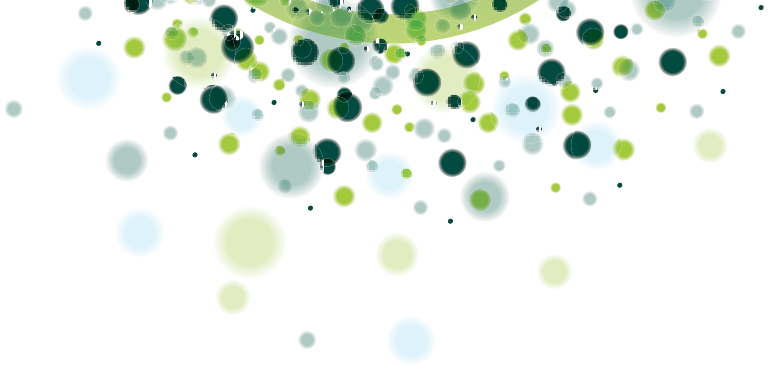

Diabetes

Essential Skills Kit

Managing Profiles

Project READ Literacy Network

Ontario Trillium Foundation / Fondation Trillium de l'Ontario

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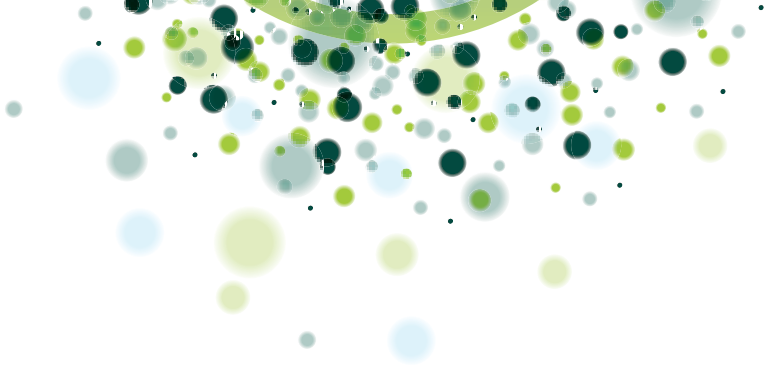

Managing Diabetes with a Healthy Diet Profile

Introduction

A person living with diabetes must follow a healthy to diet to control their blood sugar daily. Following a healthy diet includes understanding the foods that are eaten both at home and when eating out. The person needs to be aware of the carbohydrates and the amount of food they eat and the impact on their blood glucose at all times. Nutrition facts play a large part in understanding the role of food and living with diabetes. The person living with diabetes will work with health care practitioners to learn about the diet that best suits them.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read an overview to understand that the body breaks down carbohydrates into glucose. **AN** Read information to understand that the Glycemic Index ranks carbohydrate rich foods by how much they raise blood glucose levels compared to a standard food. **AN** Read an information paper to understand that low blood sugar is the same as hypoglycemia and hyperglycemia is the same as high blood sugar. **AN** Read a document to understand that a carbohydrate is sugar. **AN**
Level 3	Read a brochure to identify the tips for making and eating healthy meals. For example: take time to plan meals; buy foods that are in season; use spices to add flavour and monitor portion sizes. **AN** Read an introduction to healthy eating to understand that persons living with diabetes need to monitor their total fat intake, reducing all fats not just bad fats. **AN** Read information about healthy eating and understand this will help as a guide until seeing a registered dietitian. **AN** Read an overview of soluble fibre to understand that soluble fibre may help with controlling blood sugar and the person living with diabetes should eat between 25 and 50 grams of fibre per day. **AN**

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Level 3

Read the Canada Food Guide to understand food groups and appropriate portions to meet the needs of the person living with diabetes. **AN**

Read information about healthy eating to understand that a balanced diet includes: vegetables, grain products, milk products, meat and meat alternatives at each meal. **AN**

Document Use

Level 1

Scan and locate where information goes in a logbook in order to record your diet over a period of 6 months. This will help you understand healthy and non healthy choices. **AN**

Level 2

Scan and locate tips and reasons for eating healthy. Some tips include: eating three meals a day, eating food that contains starch (potatoes, rice or noodles), and drinking water when thirsty. **AN**

Scan a diagram to understand portion sizes through the use of your hand. For example: the amount of meat and alternatives should be no more than the size of your palm and the thickness of your little finger. Vegetables can be as much as you can hold in both hands. **AN**

Scan, locate and record information required on a tracking sheet for testing blood sugar, foods eaten, times of day the food was eaten, grams of carbs eaten, and comments. **D**

Read a food label or information sheet and understand that nutrients are fat, cholesterol, sodium (salt), carbohydrates, protein, vitamins and minerals. For example: calcium and iron are minerals and sugar and fibre are carbohydrates. **D**

Refer to fact sheets to understand how fibre can be beneficial to your diet, how you can use it and where to find more information about fibre. **AN**

Read and understand the importance of nutrients. Identify the nutrient, what foods have this nutrient and how the nutrient helps the body. **AN**

Use the Glycemic Index chart to choose breads, cereal, grains and other foods that are at the lower end of the glycemic index. For example: to create a grocery list, put together a meal plan or for dietary needs. **AN**

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Level 2	Read and understand a document detailing the symptoms, causes and treatment of hypoglycemia (low blood glucose level). The symptoms may include: feeling light-headed, confused, sweaty, faster heart rate, etc. ANRefer to a list of food bank or hamper programs to locate food in case of emergency. **AN** Read and understand a document detailing the symptoms, causes and how to treat hyperglycemia (high blood glucose level). The symptoms may include being thirsty, urinating more often and being tired. **AN**
Level 3	Identify and understand words on ingredient lists. For example: hydrogenated fats and oils are trans fat, monosodium glutamate is sodium (salt), and fructose, sucrose are sugars. **AN** Follow a weekly meal plan that outlines portion sizes, types of food for breakfast, lunch, dinner and snacks that are healthy. **D** Learn to use the Nutrition Facts Table on foods to begin to understand the percent of daily values contained in various foods. For example, look for the content of things such as sodium and fibre. **W** Review and identify sugar and sweeteners that increase blood glucose levels and those that do not increase blood glucose levels. For example: brown sugar is a carbohydrate that can affect blood glucose; whereas artificial sweeteners may be safe if your health practitioner recommends them and as long as no more than the acceptable daily amount is eaten or drunk. **AN** Identify and understand information on food labels that make claims such as: "no added sugar" which means that no sugar or ingredients with sugar were added. **W**
Level 4	Review and understand the nutrition labels on food packaging. For example; daily value of total fat on the label is the amount based on the serving size also listed on the label. **W**

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Numeracy

Level 1

Measure out 15 grams of carbohydrates for treating hypoglycemia. For example: 3/4 cup or 175ml of honey or six lifesavers® equals 15 grams of carbohydrates. **AN** Measurement and Calculation

Measure out serving sizes using the Canada Food Guide examples. For example: 250 ml or 1 cup of broccoli, carrots or peppers is equal to 2 servings of fruit and vegetables. **AN** Measurement and Calculation

Calculate the amount of carbohydrates in food. Understand that fibre does not raise blood glucose and is subtracted from the total carbohydrates listed on the Nutrition Facts Table on food. For example: if a food contains 10 grams of total carbohydrates (sugar and starch combined) and also has 2 grams of fibre, you must subtract the 2 grams of fibre from the 10 grams of carbohydrates and will get a total of 8 grams of carbohydrates. **D** Measurement and Calculation

Use the Glycemic Index chart to choose the breads, cereal, grains and other foods that are at the lower end of the glycemic index. **W** Data Analysis

Compare and understand types of fat in different foods. For example: read the nutrition labels of different foods eaten regularly to locate which one has the lower fat content. **W** Data Analysis

Use the Nutrition Facts Tables to make comparisons on the number of calories per serving and the daily values of nutrients such as cholesterol, carbohydrates, sodium vitamins and fat. **W** Data Analysis

Use the plate method (a pie chart) to measure out food portions on an 8 inch plate at each meal. **D** Data Analysis

Divide appetizers or meals in half when eating out. For example: if the Caesar salad is large, share it with another person at the table. **AN** Numerical Estimation

Estimate the size of the food portion by using your fist, palms or the size of a tennis ball when preparing meals or when eating out (buffet style). **AN** Numerical Estimation

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Level 2	Calculate the cost of food needed for the weekly meal plan. For example: having 1 cup of milk with a meal each day for seven days equals approximately 2 litres. Therefore you will need to purchase 2 to 4 litres of milk per week. If milk costs $2.00 per litre, a weekly supply of milk will cost between $4.00 and $8.00. **W** Money Math Total the cost of food needed for the weekly meal plan. For example: total the costs of different foods and include that in the budget for groceries. **W** Scheduling, Budgeting and Accounting Calculate the amount of food needed for the weekly meal plan. For example; having 1 cup of milk with a meal a day for seven days equals approximately 2 litres therefore you will need to purchase 2 to 4 litres of milk for one week. **W** Measurement and Calculation
Level 3	Create a weekly meal plan that outlines portion sizes and types of food that are healthy for breakfast, lunch, dinner and snacks. **W** Scheduling, Budgeting and Accounting When planning to eat out, timing is important for people living with diabetes. For example: you may have to have a snack if you are eating out at a later time. You may also have to adjust the time that you take your insulin based on your blood glucose levels. **AN** Scheduling, Budgeting and Accounting Calculate and compare the amount of carbohydrates in a serving size. For example, will this serving size control the blood glucose level? **D** Data Analysis

Writing

Level 1	Complete a screening tool or review tool outlining your diet over a period of 6 months in order to understand healthy and non-healthy food choices. **Y** Complete handouts received at a workshop given by a diabetes educator to record and determine if your current diet is high in calories, fat, carbohydrates and salt. **AN** Fill in a food record that lists foods and amounts eaten each day. **D**
Level 2	Prepare a grocery list for shopping. This will help getting all the ingredients needed for making healthy meals. **W** Complete a tracking sheet for testing blood sugar, foods eaten, time of day the food was eaten, grams of carbohydrates eaten, and comments. **D**

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Oral Communication

Level 1

Participate in interactive discussions. Discussions may take place: in a formal setting like a workshop regarding the Nutrition and Health Claims on food labels; one-to-one with a health practitioner or among friends and family members. **AN**

Ask questions at the grocery store about the foods available that are suitable for a person living with diabetes or take a Grocery Store Tour. Grocery Store Tours are often done with the local health unit. **AN**

Discuss with the diabetes educator, healthy food choices when eating out. **AN**

Computer Use

Level 2

Create an individual food guide by following the interactive tool at the Canada's Food Guide website. For example: choose the foods that you like and when completed the interactive tool will give the recommended number of servings for each food group. Print and follow the recommendations. **AN**

Go to the Canada's Food Guide or Canadian Diabetes Association websites to locate various tools for healthy eating. Information may include: recommended servings per day, how to count food servings in a meal and meal planning. **AN**

Use the internet to find support groups for diabetes. Read about new developments, tips, recipes or reviews on diabetic medical supplies or equipment. Watch instructional videos for making health meals. **AN**

Thinking Skills

Level 1

Decide if the product is a functional food. Assess the following information: is the food made by a reputable company; is there medical evidence; does it seem too good to be true; does the label explain the number of servings needed for the benefit the food claims to have and have you talked with your health care practitioner? Understand that a functional food has been changed to enhance or improve health benefits. For example: probiotic yogurts or Omega-3 enriched eggs. **AN** Decision Making

Assess the recipes used most often for ingredients that can be reduced, eliminated or substituted. For example: use a substitute for sugar or can this recipe be baked instead of fried? **AN** Problem Solving

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Level 1	Scan magazines to find recipes suitable for people living with diabetes. **AN** Finding Information Find information on food labels and compare to the Nutrient Content Claim document for meaning. Nutrient Content Claims are claims made by the manufacturer. For example: to be a "High source of fibre" the food must have at least 4 grams of fibre per serving. **AN** Finding Information Always consider your choice of food when eating out. For example: choose a salad rather than French fries or a seafood cocktail rather than garlic bread. **AN** Critical Thinking Understand that blood glucose means the same as blood sugar. **AN** Critical Thinking
Level 2	Decide what to buy when shopping and what can be made at home. For example: buy vegetables that are in season (corn in August); stock up on canned or frozen goods when on sale; make your own muffins and soups. **W** Decision Making Evaluate how nutrition information on food labels will assist in selecting foods that fit into Canada's Food Guide. **W** Decision Making Determine how eating foods or consuming alcohols that are high in sugar will impact blood glucose levels and the meals that you will be eating that day. For example: if you are attending a birthday party and may be having cake and/or a drink, do you have to adjust the other meals, or medication for that day? **AN** Decision Making Make adjustments to medication and the other foods that you eat throughout the day if you choose to eat sweets and/or alcohol on special occasions. **AN** Decision Making Assess a nutrient content claim from a manufacturer's food label. For example: a nutrient content claim may be "A Good Source of Calcium." The product must contain at least 15% of the recommended daily intake of calcium for this claim to be on the label. This will assist you in deciding what foods are healthier. **AN** Problem Solving Follow a meal plan for a full week. Incorporate a variety of food and nutrition choices each day. **W** Job Task Planning and Organizing When travelling, plan for a possible disruption to the normal schedule of daily eating. For example: you may not eat at the same time, so you may need to bring snacks with you. **AN** Job Task Planning and Organizing

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Level 2

Using diet to control your diabetes may mean having to change the time that you eat throughout the day. For example: if your lunch at work is delayed, you may need to have a snack until you can have your lunch. **D** Job Task Planning and Organizing

Plan to have an emergency pack always available at home or when you go out. An emergency pack contains carbohydrates, glucometer, lancets and prescribed medication in case there is a change in your condition. **D** Job Task Planning and Organizing

Refer to fact sheets to understand how fibre can be beneficial to your diet, how you can use it and where to find more information. **AN** Finding Information

Level 3

If you are experiencing hypoglycemia follow the treatment tips such as; test blood sugar, eat carbohydrates, test blood sugar again to ensure that levels are returning to normal. **AN** Problem Solving

When eating out there are a number of things to consider that will affect blood glucose levels including: what you are eating, how much you are eating and what time you are eating. **AN** Critical Thinking

Level does not apply

Remember to take 15 grams of carbohydrates to treat low blood sugar.
D Significant Use of Memory

Recognize symptoms and remember the treatment of low blood sugar.
D Significant Use of Memory

Remember 15 grams is equal to one carbohydrate choice. For example; when reading food labels, planning meals and for symptoms of hypoglycemia.
D Significant Use of Memory

Remember to carry testing supplies and an emergency supply of carbohydrates at all times. **D** Significant Use of Memory

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Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2

Work with diabetes educators to determine what is causing continued low blood sugar. It may be a result of not eating properly after exercising, or unhealthy food choices. **AN**

Work with diabetes educators to understand the best choice of foods. **AN**

Attend workshops to understand the benefits of physical activity combined with healthy eating. **AN**

Level 3

Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

Attend several workshops to learn about counting carbohydrates, nutrition claims, comparing food labels, understanding the percent Daily Value on food labels and wording on ingredient lists.

Learn new recipes from magazines, websites, health care practitioners and other people living with diabetes.

Learn how physical activity impacts the diet. Learn when to eat and what to eat before and after exercising.

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Managing Diabetes with Physical Activity Profile

Introduction

People living with diabetes should participate in physical activity to help with the control of their diabetes and the complications that may occur. Along with a healthy diet, physical activity can help with maintaining blood glucose levels; lower the risk of complications, such as heart disease and high blood pressure. Persons living with diabetes will test their blood sugar before and after exercising and control their carbohydrate intake.

Reading Text

Documents, pamphlets and brochures are used for providing information to persons living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2

Read and understand information on the benefits of physical activity, such as: weight loss, stronger bones, and increased energy levels and improved blood pressure. If you are a person living with Type 2 Diabetes, physical activity may improve your body's sensitivity to insulin. **AN**

Read and understand a document on how to determine a healthy weight. For example: determine your BMI (Body Mass Index) or find out your waist size. Realize that a healthy BMI is between 18.5 and 24.9 for the age group 20 to 65. **AN**

Read and understand information outlining that some diabetes medication may affect weight. Changes in weight may be either weight loss or weight gain. **AN**

Read and understand an information paper that indicates that a person living with diabetes has higher risks of complications when their weight is carried in the abdomen. For example, if you are female and your waist measurement is over 35 inches, you are at a higher risk. **AN**

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Document Use

Level 2

Follow instructions to increase physical activity to help manage your diabetes and reduce the risk of diabetic complications. Start with 10 minutes per day of aerobic exercise then when ready begin with resistance training. **AN**

Scan and locate the types of physical activity that are suggested on an information sheet. For example: aerobic exercises - running, swimming or playing hockey; Resistance exercises - weight training and thera-band exercises. **AN**

Scan to locate the steps to determine BMI (Body Mass Index) on an information sheet. BMI compares a person's weight to their height. **M**

Follow the visual instructions for doing resistance training. For example: exercises for chest, shoulders and upper arms. **W**

Scan a chart that includes different activities and blood sugar levels before and after exercising for each day of the week. Fill in required information. Check off the activities as they are completed. **D**

Scan and locate goals for maintaining a healthy weight, such as, eating only when you are hungry, eating regular and balanced meals and checking the portion sizes of food. **D**

Numeracy

Level 1

Schedule the time needed to include physical activity into daily activities. (30 minutes a day, 5 days per week is recommended). **D** Scheduling, Budgeting and Accounting

Measure the circumference of your waist to determine if it is healthy for your gender. For example, for women a good waist circumference is less than 35 inches. **AN** Measurement and Calculation

Compare your BMI (Body Mass Index) to the recommended BMI if you are female or male. A healthy BMI is between 18.5 and 24.9 in the age group 20 to 65. **AN** Data Analysis

Determine the size of resistance band to use understanding that shorter band in length equals more resistance or that a longer band equals less resistance and that some bands are colour coded for degree of resistance. **AN** Numerical Estimation

Use a number line or scale to estimate how much effort is used (perceived effort) when exercising. For example: #1 - very light, #4 - somewhat hard and #7 - very heavy. **D** Numerical Estimation

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Level 2	Use a calendar to follow the plan for resistance training each week. It details each week up to 25 weeks and frequency throughout the week. **W** Scheduling, Budgeting and Accounting Calculate weight and determine that it would be beneficial to lose 5 to 10 percent of current body weight to help reduce the risk of complications. **AN** Measurement and Calculation Calculate Body Mass Index following the steps: weight divided by (height x height) using the metric system. BMI compares a person's weight to their height. **AN** Measurement and Calculation
Level 3	Calculate the cost of walking shoes and re-adjust the budget to make that purchase. **AN** Scheduling, Budgeting and Accounting

Writing

Level 1	Write an action plan outlining the resistance exercises to be completed throughout the week. Include comments about the exercises such as, whether the exercise caused pain. **W** Complete a weight management chart to record BMI, target BMI, waist measurement, target waist management, current weight and percent target weight loss. **M**
Level 2	Complete a chart that includes different activities and blood sugar levels before and after exercising for each day of the week. Check off the activities as they are completed. **D**

Oral Communication

Level 2	Discuss the complications of diabetes and inactivity with the exercise therapist, diabetes educator or other health care practitioner. Complications may occur with: diabetes, cardiovascular system or musculo-skeletal system. **AN** Participate in workshops that promote the benefits of physical activity. Learn about the types of exercises that best suit you. **AN**

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Level 3

Discuss the 5 "A"s (Assess, Advise, Agree, Assist and Arrange) of Physical Activity with the exercise therapist or diabetes educator. The 5 "A"s include: Assess - current physical activity level; Advise - receive encouragement to get more active; Agree - work with the educator to develop an action plan; Assist - identify and learn how to overcome barriers and Arrange - follow-up with the educator to review and receive more advice on continued physical activity. **AN**

Computer Use

Level 2

Search online to locate and calculate Body Mass Index (BMI). This calculation will tell whether you are in the normal range or overweight. **M**

Use the internet to find support groups for diabetes and exercise. Read about new developments, tips, recipes or reviews on exercise equipment or groups. Watch instructional videos for using exercise equipment or exercise routines. **AN**

Thinking Skills

Level 1

Health care practitioners may suggest where to find additional information on physical activity either by using the internet or through reading more information. **AN** Finding Information

Work with the exercise therapist or diabetes educator to locate resources within the community that will assist with achieving the 5 "A"s, using handouts, phone books, the internet etc... **AN** Finding Information

Understand and assess complications such as high blood pressure, foot or eye damage or other injuries that may prevent you from doing certain exercises. **AN** Decision Making

Level 2

Evaluate your action plan and identify your goals to determine if you and the health care practitioner have covered the 5 "A"s of physical activity. The 5 "A"s include: Assess - current physical activity level; Advise - receive encouragement to get more active; Agree - work with the educator to develop an action plan; Assist - identify and learn how to overcome barriers and Arrange - follow-up with the educator to review and receive more advice on continued physical activity. **AN** Decision Making

When starting exercises you may feel discouraged. You may not know how to start or think that your health condition prevents lifestyle changes. Solutions may include: discussing the situation, setting realistic goals, or getting help with the challenges from the exercise therapist or health care practitioner. **AN** Problem Solving

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Level 2

Re-organize your days and weeks to include physical activity. You may need to change a routine of watching TV to also take the time to include exercise. Remember that 30 minutes of exercise every day is recommended.
D Job Task Planning and Organizing

Plan to have an emergency pack always available that contains carbohydrates, and prescribed medication in case there is a change in your condition when participating in physical activity. Always be prepared for sugar highs and lows when exercising by carrying 15 grams of carbohydrates. **D** Critical Thinking

Assess factors affecting blood glucose levels each time it is tested throughout the day. For example: if blood glucose is not in the target range for before exercising, has it been too long since you last ate? If blood glucose is not in the target range after exercise, how did exercising affect the blood glucose level?
D Critical Thinking

Level 3

When exercising you may experience low blood sugar. Take a fast-acting carbohydrate like glucose tablets or lifesavers® to treat low blood sugar and then retest your blood glucose level. **AN** Problem Solving

Level Does Not Apply

Remember to carry testing supplies and an emergency supply of carbohydrates at all times. **D** Significant Use of Memory

Remember never to cause pain when exercising. You should feel mild exertion.
D Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2

Work with personal trainers, friends, organized groups (gym or teams), exercise therapists and health care practitioners to achieve and maintain physical activity goals. **AN**

Work with sales clerks in speciality stores to get information and purchase the correct equipment for physical activity. These may include clothing, shoes, exercise balls, resistance bands or other exercise equipment. **AN**

Work with exercise therapists, physiotherapists, and occupational therapists or massage therapists to achieve target physical activity while not causing further complications. You may already be experiencing an injury or a disability but it may not prevent you from doing physical activity. **AN**

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Level 2

To be successful when following a diet and exercise routine you may need the support and encouragement of friends, family and exercise clubs. **AN**

Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

People living with diabetes will participate in workshops that promote the benefits of physical activity, learning about the types of exercises that best suit their needs.

People living with diabetes need to continually learn about the benefits of physical activity to manage complications related to diabetes. Learning can occur through the use of the internet, talking with health care providers and reading material.

Continually learn how physical activity impacts the diet including when to eat and what to eat.

Managing and Measuring Blood Glucose Levels Profile

Introduction

People living with Diabetes must manage blood glucose levels daily. Managing blood glucose includes understanding, measuring and tracking. The person may have to test their blood glucose anywhere from once per month to several times per day depending on the progression of their condition. A person with Pre-Diabetes tests less often and a person using two types of insulin checks more often. The person living with diabetes must understand the level of blood glucose in order to ensure that levels do not go below or above targets. If the person living with diabetes has difficulty maintaining the target they must have strategies for dealing with problems such as taking more carbohydrates or contacting emergency medical assistance. Tracking blood glucose levels is a large part of maintaining and understanding the effect of their eating habits and maintaining consistent targets of blood glucose.

Reading Text

Documents, pamphlets and brochures are used for providing information to diabetic patients once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read descriptions of activities related to physical fitness and the impact this has on blood glucose levels. **AN** Read instructions on how to treat mild to moderate hypoglycemia. **AN** Read and understand an information paper that states using fingertips for testing blood glucose gives the most accurate reading. **AN** Read information flyers about community resources of health practitioners and services available for glucometer support. **AN** Read and understand documents about persons living with diabetes and driving. If you drive for a living means your blood glucose must always be at least 5mmol/L. For example: if you are a truck driver you are not allowed to drive in the U.S. if your blood glucose level is less than 5mmol/L. **AN** Read and understand an information paper that indicates that blood glucose means the same as blood sugar. **AN**

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Level 3	Read an overview of insulin to understand the types, how it is administered and the dosing schedule. For example: some insulin is long acting (basal insulin) and some are short acting (bolus insulin). **AN** Read booklets such as the Meds Check Book to learn about managing diabetes including: blood glucose highs and lows, physical activity and nutrition. **AN** Read a summary of the over the counter or prescribed medication that is being taken currently. Other medications may impact the effectiveness of diabetic medication. **AN** Read and understand from an information paper that chemicals called ketones are produced when the body is not able to burn glucose and it burns fat instead. This occurs when there is too little insulin for the amount of glucose in the body. **AN**
Level 4	Read and interpret manufacturer instructions on the use of glucometers. Instructions include: how to insert the lancet and test strips; how to read and interpret the results on the meter. **AN**

Document Use

Level 1	Using a log book, scan and locate different times throughout the day when blood glucose levels need to be tested and recorded. **D** Interpret a chart to understand target levels of blood glucose throughout the day including symptoms when the levels are above or below target levels. **AN**
Level 2	Review and understand a consent form that gives permission to release information to the patient's physician or that gives permission for the health care practitioner to obtain a blood sample. **AN** Using a chart provided by a glucometer manufacturer, scan and locate the correct blood glucose levels for before and after meals. **AN** Read and understand a document detailing the symptoms, causes and how to treat hyperglycemia (high blood glucose level). The symptoms may include being thirsty, urinating more often and being tired. **AN** Read and understand a document detailing the symptoms, causes and treatment of hypoglycemia (low blood glucose level). The symptoms may include: feeling light-headed, confused, sweaty, faster heart rate, etc. **AN**

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Level 2	Review and understand handouts about nutritional information labels and use work sheets to learn how to use nutrition information on food labels. **AN** Scan and locate additional sources of information on a diabetes handout. Additional sources of information may include: websites, telephone numbers, publications and community programs. **AN** Follow instructions on how to test blood glucose levels at home. **AN**
Level 3	Review the list provided by the pharmacist of the medications being taken, including the names, purposes, precautions, and side effects. **AN**

Numeracy

Level 1	Calculate the cost of diabetic supplies to determine if financial assistance will be required. **AN** Money Math Calculate the cost of diabetic supplies needed for testing and administering diabetic medication. **AN** Money Math Calculate the cost glucose substitutes for use when suffering from hypoglycemia - such as dextrose tablets. **AN** Money Math Follow a daily schedule to check blood sugar levels. For example: blood glucose should be checked two hours after every meal. **D** Scheduling, Budgeting and Accounting Enter times and dates into a log book when measuring blood glucose and food intake. **D** Scheduling, Budgeting and Accounting Schedule appointments with pharmacists, nurses and dieticians to learn the proper use of glucose meters and checking glucose levels. **AN** Scheduling, Budgeting and Accounting Schedule a blood test every 3 months to determine A1C level. **AN** Scheduling, Budgeting and Accounting Follow an individualized schedule for testing blood sugar. **AN** Scheduling, Budgeting and Accounting

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Level 1	Test blood sugar level before and after exercising. **D** Scheduling, Budgeting and Accounting Monitor the number of hours required to fast before a glucose tolerance test or the A1C test. Approximately 8 hours of fasting is suggested. **AN** Scheduling, Budgeting and Accounting Interpret a chart to understand target levels of blood glucose throughout the day. **AN** Measurement and Calculation Measure the recommended amount of 15 grams of carbohydrate for treating hypoglycemia and understand that 15 grams is equal to one carbohydrate. For example: 30 ml (2 tablespoons) of peanut butter or 7 crackers. **AN** Measurement and Calculation Compare blood sugar levels to the target levels each time blood glucose is tested. **D** Data Analysis
Level 2	Follow a schedule of time when treating hypoglycemia. For example; wait 15 minutes after eating to test blood sugar and if the next meal is longer than 1 hour away, eat a snack. **AN** Scheduling, Budgeting and Accounting Record blood sugar levels, symptoms and body weight when hypoglycemia occurs. **AN** Scheduling, Budgeting and Accounting Understand decimals related to blood glucose targets in order to determine the reading from a glucose meter. For example a blood glucose reading may be 7.5 mmol/L. **D** Measurement and Calculation Monitor weight using the Imperial and Metric system. A weight of 150 pounds is the same as 68.04 kilograms. **M** Measurement and Calculation Calculate the amount of diabetic supplies that is needed to take on vacation. Multiply the amount of each dose and number of doses each day times the number of days of vacation. This applies to all supplies. **AN** Measurement and Calculation Review the logbook or online graph to locate patterns in glucose levels over a period of time. This will assist in determining highs and lows in blood glucose levels and when they occur. **M** Data Analysis Understand fractions to set the lancet device depth to insert in the skin when testing blood sugar. **AN** Numerical Estimation
Level 3	Re-adjust a budget to include the cost of all diabetic supplies. Many diabetics reuse the lancets putting themselves at risk. Lancets should only be used once. **M** Scheduling, Budgeting and Accounting

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Writing

Level 1

Complete a wallet size card with emergency contact information to carry with you. **AN**

Write the name of the foods consumed at each meal and snack in a log book or journal. **D**

Complete logs which may include recording blood glucose, blood pressure, allergies, dates, times, meals and medication. **AN**

Level 2

Complete a consent form that gives permission to release information to the patient's physician or gives permission for the health care practitioner to obtain a blood sample. **AN**

Complete applications for claiming the cost of diabetic supplies and medication. For example: the Ontario Drug Benefit Program has an application process and an application for insulin syringes if the diabetic is a senior. **AN**

Oral Communication

Level 1

Discuss with nurse or pharmacists and customer service representatives of glucometer manufacturers to gain more information about the glucometer capabilities or problems. **AN**

Level 2

Participate in a screening process with pharmacists or diabetes educators to decide on the glucometer best suited to their needs. **AN**

Level 3

Discuss with the diabetes educator about testing blood including: size of blood drop needed; type of blood glucose strips to use; cleaning the meter; accuracy of meter and coding or programming the meter. **AN**

Computer Use

Level 3

Use glucometers to monitor blood glucose levels. For example, understanding how to scroll through the menu to locate icons that represent before and after meals results, logbook entries, results shown as mmol/L or mg/dL, etc. **D**

Use software to transfer or print data, such as blood glucose and insulin dose information to be viewed by your healthcare practitioner. **AN**

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Thinking Skills

Level 1

If you are experiencing pain when testing your fingertips decide not to go so deep when you lance or decide to use a lancing device that has a dial that selects the how deep the puncture goes. **AN** Decision Making

Contact provincial agencies such as the Trillium Drug Program by phone or internet to locate information regarding health coverage available. For example: annual grants may be available to assist with the purchase of needles and syringes. **AN** Finding Information

Contact diabetes educators or pharmacists for more information about glucometers and supplies or ask if the information is available in a different format. **AN** Finding Information

Decide to put all medical information in a safe place in your home. This keeps all important medical information in the same place. For example create a list or us "My Health Profile" from the Meds Check Booklet. **D** Critical Thinking

Level 2

Work with the diabetes educator or pharmacist to determine the best choice for a lancet and glucometer. Some considerations include whether the device is covered through support programs available. **AN** Decision Making

Understand that the lancet used for testing blood glucose levels is a needle and must be disposed of in a container that cannot be punctured. Sharps cannot be disposed of in regular garbage. A used plastic laundry detergent container would work to store used lancets and could then be taken to hazardous waste or a pharmacy for proper disposal. **D** Decision Making

Review the logbook to identify patterns in glucose levels over a period of time. This will assist in determining highs and lows in blood glucose levels and when they occur. Decide to make adjustments to food intake to balance blood glucose levels. **AN** Decision Making

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Level 2

At each meal choose at least 4 carbohydrates and ensure that at least 2 of those choices are healthy so that you meet the goals that have been established with the dietitian. **D** Decision Making

Decide that when you are ill you must drink 8 oz. (1 cup) of sugar free fluid every hour and consume 15 grams of carbohydrates every hour. For example: 6 soda crackers, 1/2 cup of unsweetened applesauce, 3 glucose tablets or 1/2 cup of regular jello. **AN** Decision Making

When measuring blood glucose, record the reading. Look at the coloured chart with the line graph of blood glucose levels. If the reading is too high, follow the instructions to lower it - take more insulin, less sugar or more exercise. If the reading is too low follow the instructions to raise it - eat 3 dextrose tablets, 1 teaspoon of sugar or pop. When you have followed the instructions retest blood glucose levels to ensure that it is now in the target range. If it is not in range, seek immediate medical help. **AN** Problem Solving

Follow several steps to treat low blood sugar (hypoglycemia). The steps include, testing your blood sugar, eat or drink 15 grams of carbohydrates, wait 15 minutes, and retest blood sugar. Eat at regular scheduled time unless meal is more than 1 hour away, and then eat a snack. **AN** Problem Solving

When getting an incorrect reading on the glucometer, follow a process to check that the meter and test strips are compatible. If they are not, locate and purchase the correct test strips. This may be identified through the inability to control blood sugar levels and may be identified through tracking of blood sugar levels. **AN** Problem Solving

If it is painful to test your blood glucose by pricking your fingertips, locate information on how to reduce the pain. Some of the tips may include: washing hands in warm water and then letting the arm hang by your side for a minute; using lotion on your hands to keep them soft. **AN** Problem Solving

You may not completely understand on how to use the diabetic supplies. In this case decide to talk to the diabetes educator, pharmacist or health care provider. They can show you how to use them properly. **AN** Problem Solving

Plan to have an emergency pack always available at home or when you go out. An emergency pack contains carbohydrates, glucometer, lancets and prescribed medication in case there is a change in your condition. **D** Job Task Planning and Organizing

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Level 3	Determine the most appropriate medication when there are job restrictions that may limit the ability to have strict control over testing blood glucose and administering medication such as insulin. For example: a truck driver may decide to use long acting insulin rather than short acting insulin to conform to national and international driving laws. **AN** Decision Making
	Level does not apply When receiving instructions on injecting insulin it is most often done through discussion rather than paper based. The person living with diabetes must remember the steps discussed when injecting. **D** Significant Use of Memory Remember to carry testing supplies and an emergency supply of carbohydrates at all times. **D** Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D**

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with doctors or diabetes educators to determine what is causing continued low blood sugar. It may be a result of illness, other medication, stress or unhealthy food choices. **AN** Work with diabetes educators or pharmacists to understand the best choice of glucometer. **AN**
Level 3	Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN** Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

People living with diabetes need to continually learn about the disease in order to control complications related to the disease. Learning can occur through the use of the internet, talking with health care providers and reading material.

People living with diabetes learn by oral and/or illustrated explanations about the effect glucose has on the pancreas.

Persons living with Diabetes will learn about advancements in glucometers as they become available. Television, internet text publications and pharmacists may be a source of information.

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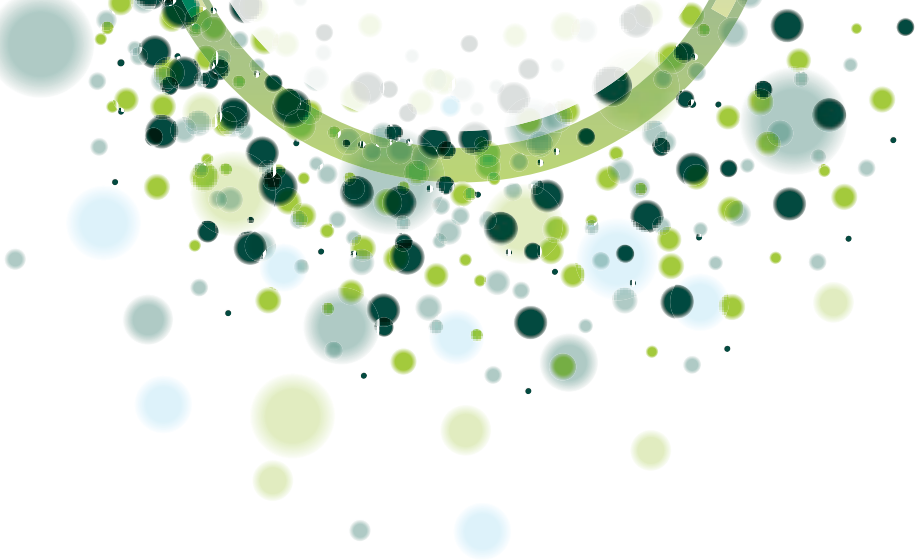

Managing Blood Pressure and Cholesterol Profile

Introduction

People living with diabetes must manage blood pressure and cholesterol levels. They may check their blood pressure once per day to establish patterns. The person living with diabetes must understand that consistent levels of blood glucose will help with maintaining or reducing the complications of blood pressure and cholesterol. If the person living with diabetes has difficulty maintaining the target, they will work with health care practitioners to identify the issues and develop strategies to prevent further complications. Tracking blood pressure and cholesterol levels is a large part of maintaining and understanding the effect of eating habits and consistent targets of blood glucose.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 1	Understand from a brochure that waist measurement has an effect on triglycerides. Reduce waist measurement to less than 37 if male and less than 32 inches if female. **AN** Read cholesterol definitions to understand key terms such as: LDL (sometimes called bad cholesterol), HDL (sometimes called good cholesterol), triglycerides and BMI (Body Mass Index). **AN**
Level 2	Read and understand from an information paper that the person living with diabetes may have a higher risk of a heart attack or stroke even when LDL-cholesterol is in the normal range. **AN** Read and understand from an information paper that the person living with diabetes may develop heart disease 10 - 12 years earlier than people who do not have diabetes. **AN** Read and identify from cholesterol information the differences between HDL and LDL cholesterol. For example: HDL (sometimes called good cholesterol) takes excess cholesterol back to the liver. Therefore the goal is to keep HDL levels high. LDL (sometimes called bad cholesterol) leaves plaque in artery walls. Therefore, the goal is to keep LDL levels low. Triglycerides are a type of fat and are associated with excess weight, alcohol and diabetes. The goal is to keep triglycerides low. **AN**

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Level 2	Read and understand from an information paper how LDL cholesterol (sometimes called bad cholesterol) may increase the risk of heart attack or stroke. **AN**
Level 3	Read documents that identify ways to lower triglycerides. For example: maintain ideal blood sugar levels; reduce the use of sugars, sugary foods and sweet drinks; choose high fibre whole grain breads and cereals and exercise regularly. **AN** Read and understand from information paper, that blood pressure may be controlled by having a healthy lifestyle, limiting salt and alcohol intake and taking medication. **AN** Read and understand nutrition labels on food. For example: look at the total cholesterol and fibre content for determining if the food is a healthy choice. **AN**

Document Use

Level 2	Scan a logbook or blood work record to identify blood work levels for fasting blood sugar, total cholesterol, LDL, HDL ratio and triglycerides. **Y** Refer to fact sheets to understand how fibre can be beneficial to your diet, how you can use it and where to find more information. **AN** Complete a record of blood pressure readings over several days. **AN** Identify the risk factors of heart disease including high blood glucose, being overweight, inactive lifestyle, high blood pressure and high cholesterol. **AN** Scan nutrition labels on foods to locate the total cholesterol and fibre content to determine if the food is a healthy choice. **W**
Level 3	Review and interpret the risk assessment for heart disease. For example: blood pressure target, blood glucose target, lowering high cholesterol, taking low dose aspirin and quitting smoking. **AN**
Level 4	Review and understand the nutrition labels on food packaging. For example: total cholesterol per serving will be listed on the label. People living with diabetes must also be aware that: recommended daily values are based on a specific number of calories per day. This may not match the number of calories in your recommended diet. Serving sizes may not be the same as container sizes. **W**

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Numeracy

Level 1

Schedule at least 60 minutes of activity each day to increase HDL cholesterol. For example, choose an activity that increases your heart beat such as walking, biking or push-ups. **D** Scheduling, Budgeting and Accounting

Complete and follow a schedule for meal planning including snack times that will be between meals - such as lunch time, dinner time or at bedtime.
D Scheduling, Budgeting and Accounting

Compare the total cholesterol to HDL ratio target to determine if you are within that target. The target should be below 4.0. **AN** Data Analysis

Take a waist measurement using imperial and metric measurements to determine if there is a need to reduce circumference. May need to reduce waist measurement to less than 37 if male and less than 32 inches if female. **AN** Measurement and Calculation

Compare blood work levels to normal targets for fasting blood sugar, total cholesterol, LDL, HDL, HDL ratio and triglycerides. **Y** Data Analysis

Use a nutrition table to compare calories, total fat, saturated fat, cholesterol and fibre content in different foods. **W** Data Analysis

Compare journal entries of food to determine healthy choices versus unhealthy choices. **AN** Data Analysis

Level 2

Purchase a blood pressure monitor for home use. **AN** Money Math

Follow recipes recommended for persons living with diabetes using both the metric and imperial system. For example a recipe may call for a 6 inch pita or 50 grams of cheese. **D** Measurement and Calculation

Understand blood pressure measurements to know when there is a problem. For example, a normal range is between 120/80 mm Hg and 129/84 mm Hg.
AN Measurement and Calculation

Level 3

Take and record blood pressure readings at least 8 times to find the average and compare to normal range. **AN** Data Analysis

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Writing

Level 1

Use a journal to track foods eaten over a period of time to monitor healthy and unhealthy choices. **AN**

Level 2

Complete a record of blood work levels for fasting blood sugar, total cholesterol, LDL, HDL, HDL ratio and triglycerides. **Y**

Complete a record of blood pressure readings over several days. **AN**

Oral Communication

Level 2

Discuss with the health care practitioner the meaning of the targets for cholesterol, HDL, LDL, and triglyceride levels and understand total cholesterol to HDL ratio. **AN**

Talk with the doctor before taking any medication, for example: to decide if taking aspirin will help control blood pressure. **AN**

Request from the health care practitioner the comparison of normal to actual levels for A1C, cholesterol and blood pressure to gain more knowledge and understanding. **AN**

Review with the health care practitioner scenarios of elevated levels of cholesterol, A1C and blood pressure to better understand and reduce the risks. **AN**

Discuss with the doctor or specialist test results for blood pressure, cholesterol ratios and blood glucose levels to decide what type of treatment is necessary. **AN**

Discuss with the health care provider things that may impact effectiveness of blood pressure and cholesterol medications. Examples are, but not limited to homeopathic medicine, OTC (over the counter) medications and certain foods like grapefruit. **AN**

Computer Use

Level 2

Search online to locate and calculate Body Mass Index (BMI). This calculation will tell whether you are in the normal range or overweight. A healthy BMI is between 18.5 and 24.9 in the age group 20 to 65. **AN**

Search online for foods and recipes that increase HDL and lower LDL. **AN**

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Thinking Skills

Level 1	Decide to begin using foods that may increase HDL. These may be: nuts and seeds, vegetable oils (canola, olive or peanut) and avocados. **W** Decision Making Locate foods, when grocery shopping, that have the Health Check™ symbol. This symbol indicates that the product's nutrition information has met the nutrient criteria as a healthy choice according to Eating Well with Canada's Food Guide. **W** Finding Information
Level 2	Receive and discuss test results for blood pressure, cholesterol ratios and blood glucose levels in order to decide what type of treatment is necessary. **AN** Decision Making Analyze the source of the food being eaten to decide whether it is has cholesterol or not. For example: did this product come from an animal? If so, it contains cholesterol. If the product came from a plant it does not contain cholesterol. **W** Decision Making To reduce the level of cholesterol there are many steps. Develop an action plan to follow a daily schedule for meal planning, an exercise routine, and recording blood work results. **AN** Job Task Planning and Organizing Research cholesterol information, such as cholesterol levels and foods that affect cholesterol, through the internet, reading brochures, or asking a dietitian or other health care practitioners. **AN** Finding Information Refer to fact sheets to understand how fibre can be beneficial to your diet, how you can use it and where to find more information. **AN** Finding Information Assess and understand the differences between healthy food choices and unhealthy food choices and the impact on cholesterol and blood pressure. For example: processed foods vs. homemade; salads vs. fries; red meat vs. fish or juice vs. soda pop. **D** Critical thinking
Level 3	If your level of LDL cholesterol is too high and needs to be lowered and if you are eating deep fried foods, candy bars or fast foods, you will have to decide on healthy choices such as fruits and vegetables to lower the LDL cholesterol and raise the HDL cholesterol. Keep a journal to track the foods that are being eaten over a period of time. **AN** Problem Solving

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Level does not apply

Always remember to look for food with the Health Check™ symbol and Nutrition Facts when shopping for groceries in order to make healthy choices.

W Significant Use of Memory

Remember to read the nutrition labels on food to locate the total cholesterol for determining if this food is a healthy choice. For example, always look for high fibre and low sodium content when making your choice. **W** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2

Work with your doctor or specialist in the treatment of blood pressure, cholesterol and blood glucose levels to monitor treatment. **AN**

Work with a nurse, dietitian, exercise therapist or other diabetes educators to begin identifying areas to achieve a healthy lifestyle in order to better control blood pressure and cholesterol levels. For example, this may include changing your eating habits and starting an exercise routine. **AN**

Work with your family members or co-workers so that they understand and know how to help support you when you are trying to change your eating and exercise habits. **AN**

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Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

People living with diabetes need to continually learn about the disease in order to control complications related to their blood pressure and cholesterol. Learning can occur through the use of the internet, talking with health care providers and reading material.

Attend several workshops to learn about carbohydrates, nutrition claims, comparing food labels, understanding the percent Daily Value on food labels, wording on ingredient lists and how these may affect blood pressure and cholesterol.

Learn new recipes from other people living with diabetes, magazines, websites and diabetes educators and health care practitioners.

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Managing Diabetes with Oral Medication Profile

Introduction

Managing diabetes with oral medication describes the information and tasks that are performed daily. Working with health practitioners is an ongoing process that prevents or reduces the risk of complications. Persons living with diabetes are responsible for managing their diabetes daily. The amount of food eaten will need to be consistently maintained to control the level of blood glucose to prevent sugar highs and lows.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read and understand directions on prescribed medication. For example: the medication for cholesterol may require that you take one tablet daily. **AN** Read and understand the medication record and that the medication record will have information for each medication listed including the name, uses, how to use, side effects, precautions, drug interactions, overdose, missed doses and storage. **AN** Read and understand information sheets that outline that some diabetes medication may affect weight. **AN**
Level 3	Read and understand information about the MedsCheck program and that it is a complete medication review with the local pharmacist. For example the pharmacist will review all medication (prescription, over-the-counter and natural health products), recommendations on self-management of diabetes, and referrals to other health care providers. **Y** Read and interpret ingredients and warnings on over-the-counter (OTC): medications that are being used for headaches, nausea, etc. For example: the medication may contain sucrose or alcohol, or the label may say not recommended for people with glaucoma. **AN**

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Document Use

Level 1

Identify three ways to enrol in the Medic Alert Program including online, by phone, or by mail. **AN**

Level 2

Review applications for claiming the cost of diabetic supplies and medication. For example the Ontario Drug Benefit Program has an application process. **AN**

Read and interpret a pill bottle label that gives the name, total daily dose, when to take and what the drug does. **D**

Review and identify the steps to take when you are ill. These steps include: monitoring blood glucose more often, taking your diabetic medication, trying to follow the meal plan and drinking at least one cup of sugar free fluids every hour. **AN**

Review an logbook or health profile to understand the type of information that is needed to complete the profile. For example there is a "My Health Profile" provided in the MedsCheck Patient Booklet. **M**

Scan and locate the information required on a referral form. Forms may include: a referral to a specialist; a confirmation letter or notice to attend a diabetes education program. Information requested may include bringing an up-to-date list of medications. **AN**

Numeracy

Level 1

Total bills for dispensing fees of diabetic supplies. **AN** Money Math

Schedule an appointment with the pharmacist for a half hour session in the MedsCheck Program. **Y** Scheduling, Budgeting and Accounting

Measure out and follow a schedule of drinking 8 ounces (I cup) of sugar free fluids every hour while ill. **AN** Scheduling, Budgeting and Accounting & Measurement and Calculation

Use the paper ruler (cm or inches) provided to measure the size of the wrist to get the measurement for a Medic Alert bracelet. **AN** Measurement and Calculation

Take medication as prescribed. For example: 2 pills twice a day.
D Measurement and Calculation

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Level 2	Calculate total claim amount to be completed on a claim form for diabetes testing supplies. **AN** Money Math Calculate the amount of medication that is needed to take on vacation. Multiply the amount of each dose and number of doses each day times the number of days of vacation. This applies to all supplies. **AN** Measurement and Calculation Determine and calculate the cost of becoming a member of Medic Alert versus purchasing the bracelet only. **AN** Data Analysis

Writing

Level 2	Complete applications for claiming the cost of diabetic supplies and medication. For example, the Ontario Drug Benefit Program or the Trillium Drug Program has an application process. **AN** Complete a record or log of all medications, or use the "My Health Profile" provided in the MedsCheck Patient Booklet. **AN** Complete a registration form or medical history when attending a diabetes education program or a specialist appointment including an up-to-date list of medications. **AN**

Oral Communication

Level 1	The doctor, specialist and pharmacist will direct the person living with diabetes how to take the medication. For example: medication should be taken 2 hours after eating. **AN**
Level 2	Review with the pharmacist the medication list provided and review any questions during the MedsCheck for Diabetes consultation. **Y**
Level 3	Discuss with a doctor, specialist or pharmacist the different drugs that may be prescribed for other conditions such as high blood pressure and how it may interact with the diabetes medication. For example, what side effects may occur? Homeopathic medication is also included. **AN**

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Computer Use

Level 2

Use the internet to locate a pharmacy or other medical services that are open 24 hours or on holidays. **AN**

Use the internet to find support groups for diabetes. Read about new developments, tips, recipes or reviews on diabetic medical supplies or equipment. Watch instructional videos for using diabetes equipment. **AN**

Thinking Skills

Level 1

Follow a daily schedule for taking your medication. Take the medication at the same time every day. For example, some medications must be taken with food. Each day at dinner time take the medication. The pharmacist may provide a blister pack for medications taken daily. **D** Job Task Planning and Organizing

Contact provincial agencies by phone or internet to locate information regarding health coverage available to diabetics. **Y** Finding Information

Evaluate and decide whether it is financially feasible to become a member of the Medic Alert program versus purchasing the bracelet only. Decide whether to purchase a Diabetes alert bracelet from another source (drug store, dollar store, etc…) **AN** Decision Making

Decide to put all medical information in a safe place in your home. This keeps all important medical information in the same place. For example, create a list or use "My Health Profile" from the Meds Check Booklet. **D** Critical Thinking

Level 2

Work with the pharmacist or diabetes educator to determine what the best way of dispensing the medication is. For example, use a blister pack for ease of dosing oral medication. **AN** Decision Making

Decide that when you are ill, you must drink 8 oz. (1 cup) of sugar free fluid every hour and consume 15 grams of carbohydrates every hour. For example: 6 soda crackers, 1/2 cup of unsweetened applesauce, 3 glucose tablets or 1/2 cup of regular jello **AN** Decision Making

If you are ill decide whether you can take over-the-counter medication based on understanding the interactions with your diabetes medication. **AN** Decision Making

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Level 2	If you are experiencing one of the side effects listed on the medication report or don't know how to take medication effectively, contact the pharmacist, doctor, Telehealth or go to the emergency department at the nearest hospital. **AN** Problem Solving Assess and plan to have the following with you, medications, lists of medications, blood glucose testing supplies and fast acting glucose (juice boxes, lifesavers, glucose tablets) when being hospitalized. **AN** Critical Thinking
	Level does not apply Receiving instructions on the use of glucometers is most often done through discussion rather than paper based. The person living with diabetes must remember the steps discussed when testing. **AN** Significant Use of Memory Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Attend workshops to understand the medications, complications, and healthy eating for people living with diabetes. **AN**
Level 3	Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN** Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

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Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

People living with diabetes need to continually learn about the disease in order to control complications related to their oral medications. Learning can occur through the use of the internet, talking with health care providers and reading material.

People living with diabetes learn by oral and/or illustrated explanations about the effect glucose has on the pancreas.

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Managing Diabetes with One Type of Insulin (Basal and Mixed) Profile

Introduction

Managing diabetes with One Type of Insulin (Basal or Mixed) describes the information and tasks that are required to use insulin daily. Measuring and calculating insulin dosage is critical in maintaining a healthy balance of blood glucose. People living with diabetes are responsible for managing their diabetes daily. Persons living with diabetes that are insulin dependent will need to follow a strict protocol when taking their insulin. The insulin will be taken using an injection delivery method and will be given in either a Multiple Dose Injection method throughout the day or will be administered at the SAME time of day every day. The amount of food eaten will need to be consistently maintained in order to control the level of blood glucose so that the insulin does not cause sugar lows. Working with health practitioners is an ongoing process that prevents or reduces the risk of complications.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read and understand directions on prescribed medication. For example; you may be required to have 2 insulin injections per day. **AN** Read and understand the medication record and that it will have information including the name, uses, how to use, side effects, precautions, drug interactions, overdose, missed doses and storage for each medication listed. **AN** Read and understand an information paper that indicates that some diabetes medication may affect weight. **AN** Read and understand from an information paper that when taking insulin it must be injected under the skin for it to work, not injected directly into the blood. **AN**
Level 3	Read information that explains what insulin is; what it does to control blood sugar and how it is administered. **AN**

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Level 3	Read and understand from the MedsCheck booklet that the MedsCheck program is a complete medication review with the local pharmacist. For example the pharmacist will review all medication (prescription, over-the-counter and natural health products), recommendations on self-management of diabetes, and referrals to other health care practitioners. **AN** Read and understand information outlining the need to have meals at the same time every day to match mealtime insulin doses. **D** Read and interpret ingredients and warnings on over-the-counter (OTC) medications that are being used for headaches, nausea, etc. For example: the medication may contain sucrose or alcohol or the label may indicate it is not recommended for people with glaucoma. **AN**

Document Use

Level 1	Scan and locate three ways to enrol in the Medic Alert Program including online, by phone, or by mail. **AN**
Level 2	Review applications for claiming the cost of diabetic supplies and medication. For example the Ontario Drug Benefit Program has an application process and an application for insulin syringes if the diabetic is a senior citizen. **Y** Review a logbook or health profile to understand the type of information that is needed to complete the profile. For example: there is a "My Health Profile" provided in the Meds Check Patient Booklet. **M** Scan and locate the information required on a referral form. Forms may include: a referral to a specialist; a confirmation letter or notice to attend a diabetes education program. Information requested may include bringing an up-to-date list of medications. **AN** Review and identify the steps to take when you are ill. These steps include: monitoring blood glucose more often, taking your diabetic medication, trying to follow the meal plan and drinking at least one cup of sugar free fluids every hour. **AN**
Level 3	Scan an insulin logbook to locate the type of information requested. For example: the name of the insulin, the amount or dosage, the time it was injected, how long the insulin worked and when the insulin was most effective. **AN**

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Numeracy

Level 1

Schedule an appointment with the pharmacist for a half hour session in the MedsCheck Program. **Y** Scheduling, Budgeting and Accounting

Measure out and follow a schedule of drinking 8 ounces (I cup) of sugar free fluids every hour while ill. **AN** Scheduling, Budgeting and Accounting & Measurement and Calculation

Use a calendar to calculate the number of days insulin has been open. Understand that insulin has a shelf life and large vials or bottles cannot be used after 28 days if it has been opened. **AN** Scheduling, Budgeting and Accounting

Take medication as prescribed. For example: basal insulin at meals or one insulin injection in the morning. **D** Measurement and Calculation

Use the paper ruler (cm or inches) provided to measure the size of the wrist to get the measurement for a Medic Alert Bracelet. **AN** Measurement and Calculation

Level 2

Calculate total claim amount to be completed on the claim form for diabetes testing supplies. **M** Money Math

Understand that insulin must be refrigerated with the temperature being between 2° and 10° C or (35° and 50°F). **AN** Measurement and Calculation

Calculate the amount of insulin that is needed to take on vacation. Multiply the amount of each dose and number of doses each day times the number of days of vacation. This applies to all supplies. **AN** Measurement and Calculation

Determine and calculate the cost of becoming a member of Medic Alert versus purchasing the bracelet only. Determine the cost of purchasing an alert bracelet from another source. **AN** Data Analysis

Review the logbook to compare and identify patterns in glucose levels, food intake and insulin doses over a period of time. This will assist in determining highs and lows in blood glucose levels and when they occur. The diabetic will then decide to make adjustments to their food intake to balance the blood glucose levels. **M** Data Analysis

Level 3

Re-adjust a budget to include the cost of **all diabetic supplies**. Many people living with diabetes reuse the lancets putting themselves at risk. Lancets should only be used once. **M** Scheduling, Budgeting and Accounting

Record of the names of the insulin, amount or dosage, and what time/s you injected the insulin, how long the insulin worked and when the insulin was most effective in order to identify and analyze the patterns. **D** Data Analysis

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Writing

Level 2

Record information about insulin used throughout the day including the time, name of insulin, amounts of insulin, how long it worked and when it was most effective. **D**

Complete applications for claiming the cost of diabetic supplies and medication. For example: the Ontario Drug Benefit Program has an application process and an application for insulin syringes if the diabetic is a senior citizen. **Y**

Complete a registration form or medical history when attending diabetes education program or a specialist appointment. Required information may include an up-to-date list of medications. **AN**

Oral Communication

Level 1

The doctor or diabetes educator will direct the person living with diabetes how to take the insulin. For example: medication should be taken at a certain time of day for the maximum benefit. **AN**

Level 2

Review with the pharmacist the medication list provided and review any questions during the MedsCheck for Diabetes consultation. **Y**

The diabetes educator or pharmacist will provide insulin pen training through hands on practice in a half hour session. **AN**

Level 3

Discuss with the doctor or a specialist the different drugs that may be prescribed for high blood pressure and how it may interact with the diabetes medication. For example: what side effects may occur? **AN**

Computer Use

Level 2

Use the internet to find support groups for diabetes. Read about new developments, tips, recipes or reviews on diabetic medical supplies or equipment. Watch instructional videos for using diabetes equipment. **AN**

Level 3

Use software to transfer or print data, such as blood glucose and insulin dose information to be viewed by your health care practitioner. **AN**

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Thinking Skills

Level 1

Contact provincial agencies such as the Trillium Drug Program by phone or internet to locate information regarding health coverage available to diabetics. For example: annual grants may be available to assist with the purchase of needles and syringes. **AN** Finding Information

Decide to put all medical information in a safe place in your home. This keeps all important medical information in the same place. For example: create a list or use "My Health Profile" from the Meds Check Booklet. **D** Critical Thinking

Level 2

Understand that the lancet used for testing blood glucose levels is a needle and must be disposed of in a container that cannot be punctured. Sharps cannot be disposed of in regular garbage. A used plastic laundry detergent container would work to store used lancets and could then be taken to hazardous waste or a pharmacy for proper disposal. **D** Decision Making

Work with the pharmacist or diabetes educator to determine what would be the best choice for a lancet and glucometer. One possible consideration includes whether the device may be covered through a government support program. **AN** Decision Making

Decide that when you are ill you must drink 8 oz. (1 cup) of sugar free fluid every hour and consume 15 grams of carbohydrates every hour. For example: 6 soda crackers, 1/2 cup of unsweetened applesauce, 3 glucose tablets or 1/2 cup of regular jello. **AN** Decision Making

You may not completely understand on how to use the diabetic supplies. In this case decide to talk to the diabetes educator, pharmacist or health care provider. They can show you how to use them properly. **AN** Problem Solving

Understand that when the insulin pen is not loading or dispensing correctly, you will need to contact the pharmacist or other health care provider to help resolve this issue. **AN** Problem Solving

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W = at least once per week

Level 2	Understand that when being hospitalized, plan to have the following with you: medications, lists of medications, blood glucose testing supplies and fast acting glucose (juice boxes, lifesavers, glucose tablets). Hospitals do not always have a specific type of insulin. **AN** Critical Thinking Understand that different injection devices require specific injection sites. These sites might be different from the pattern the doctor or diabetes educator has outlined. **D** Critical Thinking If the reading on the glucometer is not correct, it may be that glucometer and test strips are not compatible. Contact the pharmacist or other health care provider to help resolve this issue. **AN** Problem Solving
Level 3	Understand and discuss solutions with your health care practitioner when and where you can inject your insulin. You may have to use a long-acting insulin to better control your diabetes. For example: Nursing homes may have a policy stating that you cannot inject insulin in the dining room. **AN** Decision Making
	Level does not apply When receiving instructions on injecting insulin it is most often done through discussion rather than paper based. The person living with diabetes must remember the steps discussed when injecting. **D** Significant Use of Memory Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Attend workshops to understand the medications, complications, and healthy eating for people living with diabetes. **AN** Work with doctors, diabetes specialists and diabetes educators to understand the best choice of insulin delivery. **AN**

D = at least once per day
Y = at least once per year
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W = at least once per week

Level 3

Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Work with your family members or co-workers so that they understand and know how to help when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

People living with diabetes need to continually learn about the disease in order to control complications related to their insulin. Learning can occur through the use of the internet, talking with health care providers and reading material.

People living with diabetes learn by oral and/or illustrated explanations about the effect glucose has on the pancreas.

Managing Diabetes with Two Types of Insulin (Basal and Bolus) Profile

Introduction

Managing Diabetes with Two Types of Insulin (Basal and Bolus) describes the information and tasks that are required to use insulin daily. Measuring and calculating insulin dosage is critical in maintaining a healthy balance of blood glucose. Persons living with diabetes are responsible for managing their diabetes daily. Persons living with diabetes who are insulin dependent will need to follow a strict protocol when taking their insulin. The insulin will be taken using an injection delivery method and will be given in either a Multiple Dose Injection (MDI) method throughout the day or will be administered in the morning. The amount of food eaten will need to be consistently maintained and monitored to control the level of blood glucose so that the insulin does not cause sugar lows. Working with health practitioners is an ongoing process that prevents or reduces the risk of complications.

Reading Text

Documents, pamphlets and brochures are used for providing information to persons living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read and understand the medication record and that it will have information including the name, uses, how to use, side effects, precautions, drug interactions, overdose, missed doses and storage for each medication listed. **AN** Read and understand directions on prescribed medication. For example: the medication for cholesterol may require that you take one tablet daily. **AN** Read and understand that some diabetes medication may affect weight. **AN**
Level 3	Read information that explains what insulin is; what it does to control blood sugar and how it is administered. **AN** Read and interpret ingredients and warnings on over-the-counter (OTC) medications that are being used for headaches, nausea, etc. For example: the medication may contain sucrose or alcohol or the label may indicate it is not recommended for people with glaucoma. **AN**

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Level 3	Read and understand from the MedsCheck booklet that the MedsCheck program is a complete medication review with the local pharmacist. For example the pharmacist will review all medication (prescription, over-the-counter and natural health products), recommendations on self-management of diabetes, and referrals to other health care practitioners. **AN**

Document Use

Level 1	Identify three ways to enrol in the Medic Alert Program including online, by phone, or by mail. **AN**
Level 2	Review applications for claiming the cost of diabetic supplies and medication. For example: the Ontario Drug Benefit Program has an application process and an application for insulin syringes if the diabetic is a senior citizen. **AN** Review a logbook or health profile to understand the type of information that is needed to complete the profile. For example there is a "My Health Profile" provided in the Meds Check Patient Booklet. **M** Scan and locate the information required on a referral form. Forms may include: a referral to a specialist; a confirmation letter or notice to attend a diabetes education program. Information requested may include bringing an up-to-date list of medications. **AN** Review and identify the steps to take when you are ill. These steps include: monitoring blood glucose more often, taking your diabetic medication, trying to follow the meal plan and drinking at least one cup of sugar free fluids every hour. **AN**
Level 3	Scan an insulin logbook to locate the type of information requested. For example: the name of the insulin, the amount or dosage, the time it was injected, how long the insulin worked and when the insulin was most effective. **AN**

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Y = at least once per year
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Numeracy

Level 1	Schedule an appointment with the pharmacist for a half hour session in the MedsCheck Program. **Y** Scheduling, Budgeting and Accounting Measure out and follow a schedule of drinking 8 ounces (I cup) of sugar free fluids every hour while ill. **AN** Scheduling, Budgeting and Accounting & Measurement and Calculation Use a calendar to calculate the number of days insulin has been open. Understand that insulin has a shelf life and cannot be used after 28 days if it has been opened. **M** Scheduling, Budgeting and Accounting
Level 1	Use the paper ruler (cm or inches) provided to measure the size of the wrist to get the measurement for a Medic Alert bracelet. **AN** Measurement and Calculation Take insulin as prescribed. For example: multiple dose insulin at meals or one insulin injection in morning. **D** Measurement and Calculation Follow the Correction Factor formula for bolus Insulin at mealtime when blood sugar levels are not in usual dose range. For example: if the usual dose is 5 units of insulin, but blood sugar is 13.4, add 2 units of insulin to the 5 unit dose for a total of 7 units of insulin. Always follow the instructions provided to you by your health care practitioner. **D** Measurement and Calculation
Level 2	Calculate total claim amount to be completed on the claim form for diabetes testing supplies. **AN** Money Math Understand that insulin must be refrigerated with the temperature being between 2° and 10° C or (35° and 50°F). **AN** Measurement and Calculation Calculate the amount of insulin that is needed to take on vacation. Multiply the amount of each dose and number of doses each day times the number of days of vacation. This applies to all supplies. **AN** Measurement and Calculation Using the ratio given by the health care practitioner, calculate how many units of insulin must be taken at each meal. For example if the ratio is 15 grams of carbs for 1 unit of insulin (15:1) and you are having 45 grams of carbs, you will need to take 3 units of insulin (45:3). **D** Measurement and Calculation

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Level 2

Determine and calculate the cost of becoming a member of Medic Alert versus purchasing the bracelet only. Determine the cost of purchasing an alert bracelet from another source. **AN** Data Analysis

Review the logbook to compare and identify patterns in glucose levels, food intake and insulin doses over a period of time. This will assist in determining highs and lows in blood glucose levels and when they occur. The diabetic will then decide to make adjustments to their food intake to balance the blood glucose levels. **M** Data Analysis

Level 3

Re-adjust a budget to include the cost of **all diabetic supplies**. Many diabetics reuse the lancets putting themselves at risk. Lancets should only be used once. **M** Scheduling, Budgeting and Accounting

Record the names, amounts, and what times you injected the insulin, how long the insulin worked and when the insulin was most effective in order to identify and analyze the patterns. **D** Data Analysis

Writing

Level 2

Record information about insulin used throughout the day including the time, name of insulin, amounts of insulin, how long it worked and when it was most effective. **D**

Complete applications for claiming the cost of diabetic supplies and medication. For example the Ontario Drug Benefit Program has an application process and an application for insulin syringes if the diabetic is a senior citizen. **AN**

Complete a registration form or medical history when attending a diabetes education program or specialist appointment including an up-to-date list of medications. **AN**

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Oral Communication

Level 1

Interact with doctors, diabetes specialists, nurses, pharmacists and diabetes educators, to understand how and when to take insulin. For example: should a specific type of insulin be taken with meals or 30 minutes before eating? **AN**

Level 2

Review with the pharmacist the medication list provided and review any questions during the MedsCheck for Diabetes consultation. **Y**

Listen and follow the instructions from the diabetes education program or pharmacist for insulin delivery training, using a pen or syringe through hands on practice. **AN**

Level 3

Discuss with doctor or specialist the different drugs that may be prescribed for different conditions and how those drugs may interact with the types of insulin being used. For example: what side effects may occur? **AN**

Computer Use

Level 2

Use the internet to find support groups for diabetes. Read about new developments, tips, recipes or reviews on diabetic medical supplies or equipment. Watch instructional videos for using diabetes equipment. **AN**

Level 3

Use software to transfer or print data, such as blood glucose and insulin dose information to be viewed by your health care practitioner. **AN**

Thinking Skills

Level 1

Follow a daily schedule for taking insulin. Take the insulin at the same time every day. For example: some insulin must be taken with food, so each day at dinner time administer the insulin. **D** Job Task Planning and Organizing

Contact provincial agencies by phone or internet to locate information regarding health coverage available to diabetics. For example: annual grants may be available to assist with the purchase of needles and syringes. **AN** Finding Information

Decide to put all medical information in a safe place at home. This keeps all important medical information in the same place. For example: create a list or use "My Health Profile" from the Meds Check Booklet. **D** Critical Thinking

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Level 2	Understand that the lancet used for testing blood glucose levels is a needle and must be disposed of in a container that cannot be punctured. Sharps cannot be disposed of in regular garbage. A used plastic laundry detergent container would work to store used lancets and could then be taken to hazardous waste or a pharmacy for proper disposal. **D** Decision Making Persons living with diabetes work with the diabetes educator or pharmacist to determine which is the best choice for a lancet or glucometer. One possible consideration includes whether the device may be covered through a government support program. **AN** Decision Making Decide that when you are ill you must drink 8 oz. (1 cup) of sugar free fluid every hour and consume 15 grams of carbohydrates every hour. For example: 6 soda crackers, 1/2 cup of unsweetened applesauce, 3 glucose tablets or 1/2 cup of regular jello. **AN** Decision Making The person living with diabetes may not completely understand how to use the diabetic supplies. In this case decide to talk to the diabetes educator, pharmacist or health care provider. They can show you how to use the supplies properly. **AN** Problem Solving If the reading on the glucometer is not correct, it may be that glucometer and test strips are not compatible. Contact the pharmacist or other health care provider to help resolve this issue. **AN** Problem Solving Understand and decide when taking insulin that it must be injected under the skin for it to work. Insulin is not injected directly into the blood. **AN** Critical Thinking Understand that when being hospitalized, plan to have the following with you: medications, lists of medications, blood glucose testing supplies and fast acting glucose (juice boxes, lifesavers, glucose tablets). Hospitals do not always have a specific type of insulin. **AN** Critical Thinking
Level 2	Assess and understand that different injection devices require specific injection sites, regardless of the pattern the doctor or diabetes educator has outlined. **D** Critical Thinking Assess and understand that the insulin ratios may be different from breakfast, lunch and dinner. This may be a result of being more insulin resistant in the morning. **D** Critical Thinking

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W = at least once per week

Level Does Not Apply

When receiving instructions on injecting insulin it is most often done through discussion rather than paper based. The person living with diabetes must remember the steps discussed when injecting. **D** Significant Use of Memory

Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2

Attend workshops to understand the medications, complications, and healthy eating for people living with diabetes. **AN**

Work with diabetes educators to understand the best choice of insulin pen, glucometers and lancet devices. **AN**

Level 3

Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Work with your family members or co-workers so that they understand and know how to help when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

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M = at least once per month
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Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

Persons living with diabetes need to continually learn about the disease to control complications related to their insulin. Learning can occur through the use of the internet, talking with health care providers and reading material.

People living with diabetes learn by oral and/or illustrated explanations about the effect glucose has on the pancreas.

Managing Diabetes with an Insulin Pump Profile

Introduction

Managing diabetes with an insulin pump describes the information and tasks that are required to use an insulin pump. Understanding the use of an insulin pump is critical in maintaining blood glucose levels. Knowing the difference in the types of insulin being used is critical when reloading the pump or when needing to adjust blood glucose levels. Persons living with diabetes that are using an insulin pump must be able to use the technology associated with the pump. The persons living with diabetes will need to understand the displays of technology, such as graphs. Graphs will indicate spikes of insulin delivered throughout the day. Persons living with diabetes will need to understand how to input information into the pump, such as, the food they are going to eat and the amount and when they are experiencing sugar highs and lows. Working with health practitioners is an ongoing process that prevents or reduces the risk of complications related to diabetes.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 1	Understand from an information paper that the insulin pump does not measure blood glucose levels. **AN**
Level 2	Read and understand that the medication record provided by the pharmacy will have information including the name, uses, how to use, side effects, precautions, drug interactions, overdose, missed doses and storage for each medication listed. **AN** Read and understand instructions from an insulin pump that you will need specific supplies for your insulin pump. These supplies include batteries; an insulin reservoir and an infusion set. The infusion set includes tubing to connect the reservoir and an adhesive patch with tubing to go into your skin. **AN** Read and understand from insulin pump instructions that an insulin pump holds a three to six day supply of insulin and is set to supply insulin 24 hours a day, 7 days a week. **AN**

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W = at least once per week

Level 2	Read and understand an information paper that an insulin pump delivers insulin directly into the body through tubes (also known as the cannula) connected to the pump and inserted just under the skin and held in place with an adhesive patch. **AN**
Level 3	Read information that explains what insulin is, what is does to control blood sugar and how it is administered. **AN** Read and understand from the MedsCheck booklet that the MedsCheck program is a complete medication review with the local pharmacist. For example the pharmacist will review all medication (prescription, over-the-counter and natural health products), recommendations on self-management of diabetes, and referrals to other health care practitioners. **AN** Read and understand from insulin pump instructions that the insulin pump will require the calculation of a variety of insulin to food ratios to be used throughout the day. **AN** Read and understand from insulin pump instructions that the cannula is a thin plastic tube that acts like a needle and is another term for a needle, specific to an insulin pump. **AN**

Document Use

Level 2	Complete applications for claiming the cost of diabetic supplies and medication. For example the Assistive Devices Program has an application process and an application for insulin pumps for both adults and children. **AN** Scan and locate the information required on a referral form. Forms may include: a referral to a specialist; a confirmation letter or notice to attend a diabetes education program. Information requested may include bringing an up-to-date list of medications. **AN** Review and identify the steps to take when you are ill. Those steps include, monitoring blood glucose more often, taking your diabetic medication, trying to follow the meal plan, and drinking at least one cup of sugar free fluids every hour. **AN**

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Y = at least once per year
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Level 3

Scan an insulin logbook to locate the type of information requested. For example: the name of the insulin, the amount or dosage, the time it was injected, how long the insulin worked and when the insulin was most effective. **D**

Review the charts of the different pumps to compare the differences to determine the best pump for you. The review may include: reservoir size; battery type; battery life; whether it is waterproof; does it have an easy to use menu or does it work with basal and bolus rates. **AN**

Follow the instructions for changing the infusion set for the insulin pump. This will include changing the reservoir, the tubing and the cannula. **W**

Numeracy

Level 1

Schedule an appointment with the pharmacist for a half hour session in the MedsCheck Program. **Y** Scheduling, Budgeting and Accounting

Use a calendar to calculate the number of days insulin has been open. Understand that insulin has a shelf life and cannot be used after 28 days if it has been opened. **M** Scheduling, Budgeting and Accounting

Monitor the number of days it takes to go through the insulin supply in the pump. **D** Scheduling, Budgeting and Accounting

Note that the batteries will need to be replaced from one week to six weeks depending on the type of battery used. Track the life of the battery using a calendar. **AN** Scheduling, Budgeting and Accounting

Review and compare the different pumps available to determine the one that best suits your needs. For example, the amount of insulin that the pump holds may be 315 units or 200 units, or the size of the pump may be 3.2 x 2.2 x .08 inches or smaller. **AN** Data Analysis

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Level 2	Calculate total claim amount to be completed on the claim form for diabetes testing supplies. **Y** Money Math Calculate the cost of batteries for the pump. Batteries will need to be replaced from one week to six weeks depending on the type of battery used. Therefore there must be a regular supply available. **M** Money Math Understand that insulin must be refrigerated with the temperature being between 2° and 10° C or (35° and 50°F). **AN** Measurement and Calculation Follow the Correction Factor formula for Bolus Insulin when blood sugar levels are too high. For example; usual dose is 5 units of insulin, but blood sugar is 13.4 so add 2 units of insulin to the 5 unit dose for a total of 7 units. Always follow the instructions provided by the health care practitioner. **D** Measurement and Calculation Measure the amount of insulin desired to insert into the pump reservoir. Understand that 100 units equal 1 millilitre. **W** Measurement and Calculation
Level 2	Using the ratio given by the health care practitioner calculate how many units of insulin must be taken at each meal. For example if the ratio is 15 grams of carbs for 1 unit of insulin (15:1) and you are having 45 grams of carbs you will need to take 3 units of insulin (45:3). **D** Measurement and Calculation Calculate the amount of insulin that is needed to take on vacation. Multiply the amount of each dose and number of doses each day times the number of days of vacation. This applies to all supplies. **AN** Measurement and Calculation
Level 3	Review the data from the pump and compare it with the glucose record to determine when the insulin is most effective. Identify and analyze the patterns. **W** Data Analysis

Writing

Level 2	Complete applications for claiming the cost of diabetic supplies and medication. For example the Assistive Devices Program has an application process and an application for insulin pumps for both adults and children. **AN** Complete the referral form, medical history for a specialist or when attending diabetes education program. Information requested may include bringing an up-to-date list of medications. **AN** Take notes when attending workshops related to your diabetic condition. **AN**

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Oral Communication

Level 1	The doctor, pharmacist or nurse will direct the person living with diabetes how to take the medication. For example: medication should be taken 2 hours after eating. **AN**
Level 2	Review with the pharmacist the medication list provided and review any questions during the MedsCheck for Diabetes consultation. **Y** The diabetes educator or health care practitioner will provide pump training through several hands-on practice sessions. **AN**

Computer Use

Level 2	Input the blood glucose level to the pump so that the pump will adjust the amount of insulin being received. **D** The insulin pump will continuously deliver insulin based on the information you program into the pump. The information input would include when you are eating and the amount you are eating and if your blood sugar is high or low. **D** Specific pumps have their own programming, including graphs and analysis of the information from your pump. You may need to download this information occasionally. **AN** Use the internet to find support groups for diabetes. Read about new developments, tips, recipes or reviews on diabetic medical supplies or equipment. **AN**
Level 3	Follow a blog or use YouTube for a source of information on how to use diabetes equipment. **AN** Use software to transfer or print data, such as blood glucose and insulin dose information to be viewed by your healthcare practitioner. **AN**

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Thinking Skills

Level 1

If your insulin pump breaks down, you must decide to get your insulin with a different delivery method until it is repaired or replaced. You may decide to inject insulin with a pen or syringe. Always have injection supplies available for this reason. **AN** Problem Solving

Organize all the supplies necessary when changing the infusion site and refilling the reservoir. For example: insulin, syringe, tubing (cannula), insulin reservoir, and adhesive patch. **W** Job Task Planning and Organizing

Contact provincial agencies by phone or internet to locate information regarding health coverage available to persons living with diabetes. For example, annual grants may be available to assist with the purchase of insulin pump supplies. **AN** Finding Information

Level 2

Understand that the lancet used for testing blood glucose levels is a needle and must be disposed of in a container that cannot be punctured. Sharps cannot be disposed of in regular garbage. A used plastic laundry detergent container would work to store used lancets and could then be taken to hazardous waste or a pharmacy for proper disposal. **AN** Decision Making

Persons living with diabetes work with the diabetes educator or pharmacist to determine the best choice of insulin pump. One possible consideration includes whether the device may be covered through a government support program. **AN** Decision Making

Understand that the cannula used for delivering insulin from the pump acts as a needle and must be disposed of in a container that cannot be punctured. Sharps cannot be disposed of in regular garbage. A used plastic laundry detergent container would work to store used lancets and could then be taken to hazardous waste or a pharmacy for proper disposal. **AN** Decision Making

Decide on a different site for insertion of the infusion set. It is important to rotate sites to prevent hypertrophy (a build up of fat tissue). This decision should be made after being trained by a certified pump trainer. **AN** Decision Making

If you are experiencing issues with understanding how to use the diabetic supplies, decide to talk to the diabetes educator, pharmacist or health care provider. They can show you how to use them properly. **AN** Problem Solving

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Level 2	Understand that when being hospitalized, plan to have the following with you: medications, lists of medications, blood glucose testing supplies and fast acting glucose (juice boxes, lifesavers, glucose tablets). Hospitals do not always have a specific type of insulin. **AN** Critical Thinking Understand that different injection devices require specific injection sites regardless of the pattern the doctor or diabetes educator has outlined. **AN** Critical Thinking Review and identify the steps to take when you are ill. These steps include: monitoring blood glucose more often, taking your diabetic medication, trying to follow the meal plan, and drinking at least one cup of sugar free fluids every hour. **AN** Critical Thinking
Level 3	If you find that when you check your blood sugar it is too high, use the correction factor to correctly administer the bolus insulin. This may occur at times other than mealtimes. For example: usual dose is 5 units of insulin, but blood sugar is 13.4 so add 2 units to the 5 unit dose for a total of 7 units. Always follow the instructions provided by the health care practitioner. **AN** Problem Solving
	Level does not apply Remember the signs and symptoms of hypoglycemia. Treat or seek medical help immediately. The signs may include nausea, sweating, trembling and hunger. The treatment is 15 grams of carbohydrates by mouth. **D** Significant Use of Memory

Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with diabetes educators to understand the best choice of insulin pump for you. **AN**

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W = at least once per week

Level 3

Once diagnosed with diabetes, referrals to other health care practitioners will occur. These practitioners may include: diabetes specialists, nurses, dietitians, diabetes educators, eye, foot and kidney specialists, pharmacists, social workers and exercise therapists. **AN**

Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

For people living with diabetes Continuous Learning is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the person will continually increase their knowledge on how best to manage their disease.

Persons living with diabetes need to continually learn about the disease to control diabetes related complications. Learning can occur through the use of the internet, talking with health care providers and reading material, local publications and annual expos.

Persons living with diabetes will learn to use the pump through training with a diabetic educator or a nursing specialist.

Attend workshops to understand the medications, complications, and healthy eating for managing diabetes.

People living with diabetes learn by oral and/or illustrated explanations about the effect glucose has on the pancreas.

Diabetes

Essential Skills Kit

Complication Profiles

Funded by: Ontario Trillium Foundation
The Ontario Trillium Foundation is an agency of the Government of Ontario

Understanding and Managing Foot Complications Profile

Introduction

People living with diabetes manage their foot care by monitoring any changes that may occur as a result of their diabetes. They look for cuts, bruises, scrapes, numbness and monitor pain. Proper foot wear and daily foot care will assist in maintaining healthy feet.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 1	Read an overview and understand that intrinsic foot muscles are small muscles in the foot that control movement and flexibility of the arch when standing and walking. **AN** Read and understand from an information paper that podiatrists and chiropodists are health care practitioners that are foot specialists. **AN**
Level 2	Read an overview to learn about proper foot care to avoid problems with feet caused by diabetes. **AN** Read an overview to understand that diabetes can cause damage to nerves (neuropathy) affecting hands and feet. **AN** Read an overview to understand the symptoms of Diabetic Peripheral Neuropathy (nerve damage in hands, legs and feet caused by diabetes). Symptoms may include: sharp shooting pains; burning; tingling; and numbness. **AN** Read an information paper to understand that neuropathy can cause the loss of the ability to feel pain, touch, pressure or temperature in the foot. **AN**

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Document Use

Level 1	Follow exercise steps to retrain the intrinsic foot muscles (small muscles inside the foot) when instructed to by a foot specialist. **AN** Scan a referral sheet to find the most convenient location for a local foot specialist. **AN** Scan a list to find the location of a shoe store that provides the footwear that is required. **Y** Scan a document that outlines tests or visits to health care practitioners that are due and need to be scheduled. **M**
Level 2	Scan a list of recommended shoes or use a diagram or chart on a brochure to determine the best shoe for your activity and health needs. **Y** Scan information on foot care to follow a daily schedule on proper care. For example; wash feet in warm water with mild soap, check feet and between toes to find cuts, cracks or blisters; wear fresh clean socks every day. **AN** Scan the Patient Registration Form at the foot specialist's clinic to locate the information that is being requested. Information required may include, questions such as: "Have you had any heart or circulatory problems? What /medication are you taking"? **Y** Follow instructions, as directed by the foot specialist, on proper care and dressing changes after a procedure on feet. **AN** Using the Lower Extremity Amputation Prevention (LEAP) Self-Testing instructions, and by following the diagram on the LEAP instruction sheet, complete a self-test for determining sensitivity of feet. **M** Scan and follow the "do's" and "don'ts" of foot care. The "do's" include: wear proper-fitting shoes, elevate your feet and exercise to improve circulation, check your feet daily. The "don'ts" include: wearing high heels; having pedicures by non-health care practitioners and crossing your legs for long periods of time. **AN**

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Numeracy

Level 1

Purchase items for a home foot care kit. The kit may include: nail clippers, nail file, lotion, a pumice stone and a hand mirror. **AN** Money Math

Track the amount of time when soaking feet. Do not to leave feet in water for any longer than 10 minutes in order to prevent them from drying out.
AN Scheduling, Budgeting and Accounting

Schedule appointments with foot specialists or other health care practitioners indicated on a chart review letter. **Y** Scheduling, Budgeting and Accounting

Use tablespoons or cups to measure a specific amount of salt for soaking feet in warm water between dressing changes when instructed to do so by a foot specialist or other health care practitioner. **AN** Measurement and Calculation

Measure out quantities of medication to treat foot wounds and infections. For example: creams may be measured in teaspoons. **AN** Measurement and Calculation

Use a number line or scale to estimate pain. For example: #1 – little or no pain, #4 - somewhat painful and #7 - more pain. **Y** Numerical Estimation

Level 3

Adjust a budget to include the care of feet. Foot care may not be covered through the provincial health care program. Podiatrists and chiropodists are foot specialists that are paid by the patient. **M** Scheduling, Budgeting and Accounting

Writing

Level 2

Complete patient registration, health history and consent forms for the foot specialist clinic. Questions may include: "Is there a family history of diabetes?", or "What medications are you taking?" "Do you have any allergies?" **Y**

Oral Communication

Level 1

Discuss with the foot specialist the causes of damage to the feet. For example: have you done anything different lately, started wearing new shoes, or banged your feet during exercise? **AN**

Take a list of shoes to a retail shoe store and ask for assistance in getting the prescribed shoes for your condition. This may require discussion with the retail clerk to determine the best shoes and the most cost effective shoes. **Y**

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Level 2	Discuss with the foot specialist or other health care practitioners, the management of neuropathy. Management may include: proper foot care, good blood glucose control, medications and pain relievers. **AN**

Thinking Skills

Level 1	Follow the steps for taking care of feet daily. For example: wash feet in warm water-don't soak, use a pumice stone to keep calluses under control, dry feet carefully, check feet-including between toes-for any cuts or cracks, clean cuts or scratches and use a dressing or bandage for sensitive skin, trim toenails-not too short, apply an unscented lotion-not between toes, wear clean socks and proper fitting shoes-check shoes daily for signs of wear or damage. **D** Job Task Planning and Organizing Locate items around the house for a foot care kit. The kit may include: nail clippers, nail file, lotion, a pumice stone and a hand mirror. **M** Finding Information Contact a local foot specialist to find out the cost of a visit. Use the internet, a phone book or ask a health care practitioner to find a foot specialist. **Y** Finding Information
Level 2	Examine feet daily to locate any cuts, scrapes, hot or cold spots or any colour changes. Clean, dry and bandage any area that has a cut or scrape. If the condition is not improving or healing contact the foot specialist or doctor. **D** Decision Making Wear proper footwear including socks and shoes. Do not go bare foot or wear only socks. Check your shoes every time before putting them on to make sure there is nothing in the shoe that may cause damage to the foot. **D** Decision Making If shoes that are recommended or prescribed are too expensive to purchase at this time, evaluate other options for treating the problem until there is enough money for the proper shoes. **Y** Decision Making
Level 2	When doing different activities throughout the day, decide on the proper shoes to wear. For example: working may require safety boots, grocery shopping may require more comfortable shoes and when exercising, cross trainers may be the appropriate choice. **D** Decision Making When buying footwear, think about the choices that will prevent damaging your feet. For example: flip flops are not a good choice and can damage feet. A good choice may include shoes that have low heels, firm soles and laces, Velcro or buckles. **AN** Critical Thinking

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Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2

Feet must be checked regularly. If you can't see your feet get help from a friend or family member. **AN**

If you have a damaged foot that requires dressing changes, you may be working with homecare practitioners, nurses that specialize in foot care or personal support workers as well as your foot specialist or doctor. **AN**

Work with the foot specialist to follow proper foot care to minimize damage to the feet. **Y**

Continuous Learning

Continuous Learning for people living with diabetes is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the patient will continually increase their knowledge on how best to manage their disease.

People living with diabetes need to continually learn about the disease in order to control complications related to their feet. Learning can occur through the use of the internet, talking with health care providers and reading material. **AN**

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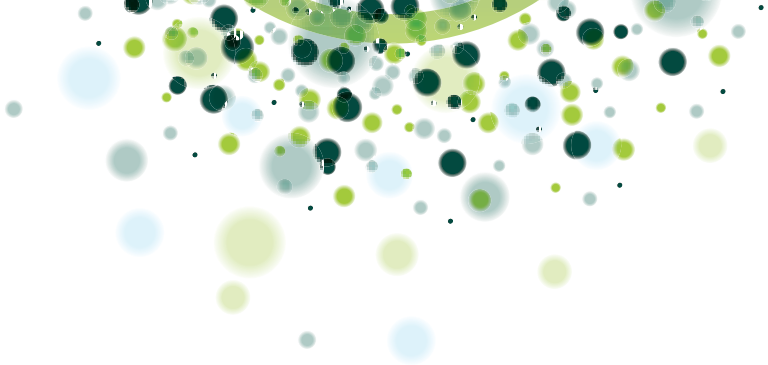

Understanding and Managing Eye Complications Profile

Introduction

People living with diabetes manage their eye care to monitor any changes that may occur as a result of their diabetes. They have their eyes tested regularly by an eye care specialist to determine if they are developing Retinopathy. The person living with diabetes may already be suffering some vision loss and require supplies that assist in their diabetes management, such as a talking glucometer or insulin pens with raised units of measure.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read an article to understand how diabetes can cause permanent, partial or total vision loss. **AN** Read an information paper to understand that Retinopathy is a disease of the retina. **AN**
Level 3	Read an information paper to understand that the blood vessels in the eye may get weak over time and are affected by blood glucose levels, blood pressure and cholesterol. **AN** Read an article to learn that a reduction in cholesterol levels may reduce the risk of diabetic eye disease. **AN** Read an information paper to understand that diabetics are at a higher risk for Retinopathy, Cataracts and Glaucoma. **AN** Read an information paper to understand the issues with insulin delivery and glucose testing when suffering vision loss. **AN**

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Document Use

Level 2

Identify the symptoms of Retinopathy (eye disease), such as: blurred vision, flashes of light in the field of vision, sudden loss of vision and blotches or spots in vision. **AN**

Review and identify information requested for completing a health history including, allergies, family history and medications. **AN**

Level 3

Read and review the definition of cataracts and glaucoma. A cataract is a clouding of the lens of the eye and glaucoma is fluid pressure inside the eye damaging the optic nerve. **AN**

Numeracy

Level 1

Schedule an annual appointment with an eye specialist to monitor for Retinopathy. **AN** Scheduling, Budgeting and Accounting

Schedule an A1C test every 3 months to ensure that the 7.0% target is maintained. Understand that 7.0% represents the blood glucose level.
AN Scheduling, Budgeting and Accounting

Exercise 30 minutes a day to help reduce the complications of diabetes.
D Measurement and Calculation

Calculate the amount of insulin to inject by counting, using sound or feel for the number of clicks on the pen. An insulin pen may have a dial similar to a kitchen timer with raised units of measurement. **D** Measurement and Calculation

Writing

Level 1

Complete patient registration, health history and consent forms for the eye specialist clinic. Questions may include: "Is there a family history of diabetes?", or "What medications are you taking?" "Do you have any allergies?" **Y**

Complete logs which may include recording blood glucose, blood pressure, allergies, dates, times, meals and medication. **D**

Oral Communication

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Level 2	Use a voice/talking blood glucose monitor to follow instructions for testing if there is vision loss. **AN** Discuss with the health care practitioner the testing supplies that are needed to manage blood glucose if there is vision loss. **AN** Complete logs which may include: recording blood glucose, blood pressure, allergies, dates, times, meals and medication. This may be done orally through voice activated software. **AN**

Computer Use

Level 1	Locate more information on the internet about vision-health. **AN**
Level 2	Use the internet, to find an eye specialist in your area. **AN** Use the internet to research stores that sell vision wear or visual aids that have been recommended by a health professional. **AN** Use the internet to find support groups for diabetes and vision loss. Read about new developments, tips, or reviews on diabetic medical supplies, or visual aids. This may be done through voice activated software. **AN**

Thinking Skills

Level 2	Assess and decide that it is important to have an eye exam before experiencing any problems. **Y** Decision Making Contact a local pharmacist, research the internet or speak with a health care practitioner to locate a blood glucose meter that has a large print screen to use when experiencing moderate vision loss. **AN** Finding Information Determine that maintaining a target blood glucose level will help prevent Retinopathy. **AN** Critical Thinking
Level 3	Evaluate talking blood glucose monitors to determine the most effective choice using the following criteria: different languages; are the strips easy to insert; does the voice guide the user through the instructions; can the results be repeated; and can the data be uploaded to a computer? **AN** Decision Making

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Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with health care practitioners to determine where diabetic supplies are available for someone experiencing vision loss. **AN** Work with the health care practitioner to maintain a healthy blood glucose target to help prevent eye disease. **Y**
Level 3	Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia. They can assist in getting you medical help or administering 15 grams of carbohydrates immediately. **AN**

Continuous Learning

Continuous Learning for people living with diabetes is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the patient will continually increase their knowledge on how best to manage their disease.

Persons living with diabetes need to continually learn about the disease to control complications related to their eyes. Learning can occur through the use of the internet, talking with health care practitioners and reading material. **AN**

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Understanding and Managing Kidney Complications Profile

Introduction

People living with diabetes manage diet to reduce or prevent kidney disease. Kidney disease is more likely to occur if you are diabetic. People living with diabetes learn about salt and protein intake and the impact that they have on the kidneys. They self-identify any symptoms they may be experiencing and work with health care practitioners to manage their health.

Reading Text

Documents, pamphlets and brochures are used for providing information to people living with diabetes once they have been diagnosed. The reading material is from a variety of sources and has been used to develop the reading text essential skill.

Level 2	Read an information paper to understand that Nephropathy is a disease of the kidneys. **AN** Read and understand an information paper that explains when the kidneys are not working properly, the following symptoms can happen: retaining salt and water causing swelling and shortness of breath. **AN**
Level 3	Read and understand an information paper that outlines that nephropathy is a complication that may occur with long-term diabetes, and has risks that may permanently damage the kidneys. **AN** Read brochures to learn how kidneys act as the filters for the body and understand that the kidneys regulate the levels of salt, water and different minerals in the body. **AN**

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Document Use

Level 2

Identify sodium/salt content on nutrition labels on food packages. For example, a can of soup may contain 800 mg. of sodium. **D**

Scan an information pamphlet and identify that almost 50% of people living with diabetes may have signs of early kidney damage. **AN**

Level 3

Read and identify the prevention and treatment of kidney disease. For example: blood glucose and blood pressure levels should be at target; blood cholesterol should be checked yearly and taking medications that are prescribed. **AN**

Numeracy

Level 1

Schedule a yearly test to have the kidneys checked. **Y** Scheduling, Budgeting and Accounting

People living with kidney disease may have to follow a schedule for kidney dialysis treatment as specified by a health care practitioner. Kidney dialysis may occur several times per week. **AN** Scheduling, Budgeting and Accounting

Compare sodium content using the nutrition facts labels on foods when grocery shopping. For example; a food may contain 850 mg. of sodium and the recommended amount per day may be 1200-1500 mg. **D** Data Analysis

Estimate the number of times that urination is occurring. For example: getting up many times throughout the night. **D** Numerical Estimation

Level 2

Understand the daily value, usually displayed as a percentage, of sodium/salt content on nutrition labels on food packages. **D** Measurement and Calculation

Oral Communication

Level 2

Discuss with the diabetes educator, foods that are healthier, i.e. with less salt or protein. **AN**

Discuss with the health care provider the number of times that urination is occurring. For example: getting up many times throughout the night may indicate a problem with the kidneys. **AN**

Discuss a list of prepared questions with the health care provider related to kidney complications. For example: validate information that might have been located on the internet or the advice of friends and family members. **AN**

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Computer Use

Level 1

Search the internet for recipes that contain less sodium/salt content. **AN**

Follow a blog or Facebook for diabetes support groups to find out tips, new developments related to kidney complication and diabetes. **AN**

Use the internet to find support groups for diabetes and kidney disease. Read about new developments, tips, recipes etc.... **AN**

Thinking Skills

Level 1

Locate low sodium/salt recipes in magazines, on the internet or by talking with a health care practitioner. **AN** Finding Information

Level 2

When shopping for groceries read and compare labels to decide on purchasing and eating foods that are lower in sodium/salt content to help prevent kidney disease. Balance salt and fat intake. **W** Decision Making

When you notice that urine is cloudy or pea coloured, decide to see the doctor to check the function of your kidneys. Understand that people with diabetes are at a higher risk for developing kidney disease. **AN** Problem Solving

Assess target blood glucose levels each time you test. Over time high blood glucose can damage tiny blood vessels in the kidneys if target levels are not maintained. **D** Critical Thinking

Level 2

Decide to contact a health care practitioner if your breath or urine smells "fruity" or like nail polish remover. This may be a sign of Ketosis. Ketosis means that chemicals are building up in your blood because of problems such as: not using enough insulin, dehydration or prolonged hypoglycemia (low blood sugar). **AN** Problem Solving

Assess and determine healthy food choices and medications to help treat kidney damage. When kidneys are damaged, medication will likely have to be taken for the rest of your life. **AN** Critical Thinking

Level does not apply

Always look at food labels to identify the level of sodium/salt and understand that too much is not a healthy choice. **D** Decision Making

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Working with Others

Working with others for people living with diabetes occurs regularly. In most cases the person manages independently with daily activities but will need to work with agencies, family members and co-workers in case of complications or emergencies.

Level 2	Work with health care practitioners to maintain a healthy blood glucose levels to reduce the risk of kidney disease. For example: discuss the medication prescribed and the impact it has on kidney function. **AN** Work with diabetes educators in order to develop a diet with foods that have lower sodium/salt content. **AN**
Level 3	Work with your family members or co-workers so that they understand and know how to help you when you are experiencing the signs of hypoglycemia or ketosis They can assist in getting you medical help. **AN**

Continuous Learning

Continuous Learning for people living with diabetes is something that is ongoing. With new developments occurring in medicine, new supplies coming to market, understanding of the disease, or complications that develop, the patient will continually increase their knowledge on how best to manage their disease.

People living with diabetes need to continually learn about the disease to control complications related to their kidneys. Learning can occur through the use of the internet, talking with health care providers and reading material. **AN**

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