

What happens if you're sick and tips to stay safe

Sick Day Management



Learning Objectives

- Managing health during illness
- Seasonal influenza vaccination
- Pneumococcal vaccination

Disclaimer: The information in this presentation is general information as referenced from Diabetes Canada. It is not intended to replace any professional medical care and advice specific to individuals.





What happens if you're sick and tips to stay safe

Lets learn the basics together.



What happens when you are sick?

If you have diabetes:

- Illnesses can cause blood sugar to rise
- Sick \Rightarrow released hormones \Rightarrow hormones raise blood sugar levels = hard for insulin /medications to lower blood sugar

Results in extra sugar in the blood instead of being used for energy

- To use this sugar, your body needs insulin



Tips to Stay Safe When Sick

Dehydration risks:

- Vomiting
- Diarrhea
- Fever
- Excessive exposure to heat and/or humidity without drinking enough)



Tips to Stay Safe When Sick

Drink plenty of fluids, with minimal sugar
(unless you have been told to limit fluids)

- Electrolyte replacement solutions
(gastrolyte, hydralyte, Pedialyte)
- Clear soups/broths
- water
- Diet soda (e.g. diet ginger-ale)
- Watered down apple juice
- Limit caffeine – makes worse (coffee, tea
& soda drinks)



Tips to Stay Safe When Sick

Prevent low blood sugar (hypoglycemia)

- If you cannot eat your usual foods, try any of the following foods – each containing 15g of carbohydrates:



1 cup



1/2 cup



2/3 cup



1/2 cup



2/3 cup



1/2 cup



1/2 cup



1/4 cup



1 twin popsicle

*consider avoiding these foods if vomiting or diarrhea



Tips to Stay Safe When Sick

If you are using insulin:

- ✓ Check blood sugar more often
- ✓ Might need to adjust the amount of insulin



Tips to Stay Safe When Sick

If you are eating less than normal:
(and symptoms last >24hrs)

- ✓ Temporarily stop certain diabetes pills
 - ✓ **Secretagogues:** e.g. Gliclazide (Diamicon), Glyburide (Diabeta), Repaglinide (GlucosNorm)



If symptoms >24hrs & continue to be dehydrated

TEMPORARILY STOP:

- Certain Blood Pressure/Heart Medications
 - ✓ **ACE Inhibitors:** e.g. Enalapril (Vasotec), Fosinopril (Monopril), Lisinopril (Prinivil/Zestril), Perindopril (Coversyl), Quinapril (Accupril), Ramipril (Altace), Trandolapril (Mavik)
 - **ARB's:** e.g. Candesartan (Atacand), Eprosartan (Teveten), Ibesartan (Avapro), Losartan (Cozaar), Olmesartan (Olmotec), Telmisartan (Micardis), Valsartan (Diovan)



If symptoms >24hrs & continue to be dehydrated

TEMPORARILY STOP:

- All Water Pills
 - Chlorthalidone (Hygroton)
 - Furosemide (Lasix)
 - Hydrochlorothiazide
 - Indapamide (Lozide)
 - Metolazone (Zaroxolyn)
 - Spironolactone (Aldactone)



If symptoms >24 hrs & continue to be dehydrated

TEMPORARILY STOP:

- Certain Diabetes Pills
 - Metformin (Glucophage or Glumetza)
 - SGLT2 Inhibitors: Canagliflozin (Invokana), Dapagliflozin (Forxiga), Empagliflozin (Jardiance)



If symptoms >24hrs & continue to be dehydrated

TEMPORARILY STOP:

- Anti-Inflammatory Pain Medications
 - Ibuprofen (Advil/Motrin)
 - Celecoxib (Celebrex)
 - Diclofenac (Voltaren)
 - Ketorolac (Toradol)
 - Naproxen (Aleve/Naprosyn)





Ask your pharmacist to tell you:

The medications I need to TEMPORARILY STOP are:

When I am eating less than normal:

When I am dehydrated:

This personalized list last reviewed (date):

Note: RESTART these medications when you are eating and drinking normally.

When to go to the Emergency Department

- If you cannot drink enough fluids
- You don't know which medications to stop
- If you don't know how to adjust your insulin
- If you have been told to check your ketones and they are moderate to high
- If you have any of the following that are not getting better:
 - Vomiting, diarrhea, stomach pain, frequent urination, extreme thirst, weakness, difficulty breathing or fever



Stay Safe When You Have Diabetes and Are Sick or at Risk of Dehydration



You are at risk of dehydration if you have any of any of the following:

- Vomiting
- Diarrhea
- Fever
- Excessive exposure to heat and/or humidity without drinking enough



DRINK plenty of fluids, with minimal sugar (unless you have been told to limit fluids)

- Consider electrolyte replacement solutions (such as Gastrolyte®, Hydralyte®, Pedialyte®), clear soups or broths, water, diet soda (e.g. diet ginger-ale), watered down apple juice
- Limit caffeine (from coffee, tea and soda drinks) which makes dehydration worse



PREVENT low blood sugar (hypoglycemia).

If you cannot eat your usual foods, try any of the following foods, each containing about 15g of carbohydrates.

- 1 cup milk*
- 2/3 cup juice
- 1/2 cup applesauce
- 1/2 cup regular Jell-O
- 1/2 cup flavoured yogurt*
- 1/2 cup ice cream* or sherbet
- 2/3 cup regular soft drink (avoid caffeinated drinks)
- 1/4 cup pudding or 1/2 cup sugar-free pudding
- 1 twin popsicle



* Consider avoiding these foods if vomiting or diarrhea

IF YOU ARE USING INSULIN, you need to check your blood sugar more often and you might need to adjust the amount of insulin you inject

IF YOU ARE EATING LESS THAN NORMAL, and the symptoms last more than 24 hours, you should **TEMPORARILY STOP:**

Certain Diabetes Pills

- Secretagogues: e.g. Gliclazide (Diamicon®), Glyburide (Diabeta®), Repaglinide (GlucoNorm®)



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If the symptoms last more than 24 hours and you continue to be dehydrated, or at risk of dehydration, you should also TEMPORARILY STOP:

Certain Blood Pressure / Heart Medications

- ACE Inhibitors: e.g. Enalapril (Vasotec®), Fosinopril (Monopril™), Lisinopril (Prinivil®/Zestril®), Perindopril (Coversyl®), Quinapril (Accupril™), Ramipril (Altace®), Trandolapril (Mavik®)
- ARBs: e.g. Candesartan (Atacand®), Eprosartan (Teveten®), Irbesartan (Avapro®), Losartan (Cozaar®), Olmesartan (Olmetec®), Telmisartan (Micardis®), Valsartan (Diovan®)

All Water Pills

- e.g. Chlorthalidone (Hygroton), Furosemide (Lasix®), Hydrochlorothiazide, Indapamide (Lozide®), Metolazone (Zaroxolyn®), Spironolactone (Aldactone®)

Certain Diabetes Pills

- Metformin (Glucophage® or Glumetza®)
- SGLT2 Inhibitors: e.g. Canagliflozin (Invokana®), Dapagliflozin (Forxiga®), Empagliflozin (Jardiance™)

Anti-Inflammatory Pain Medications

- e.g. Ibuprofen (Advil®/Motrin®), Celecoxib (Celebrex®), Diclofenac (Voltaren®), Ketorolac (Toradol®), Naproxen (Aleve®/Naprosyn®)

Note: The list above does not include the names of medications that come in combination (2 medications in one tablet).

Ask your pharmacist to tell you:

The medications I need to TEMPORARILY STOP are:

When I am eating less than normal:

When I am dehydrated:

This personalized list last reviewed (date):

Note: RESTART these medications when you are eating and drinking normally.

Call your health-care team (Pharmacist, Doctor, Nurse Practitioner, Nurse, Dietitian) and/or go the Emergency Department

- If you cannot drink enough fluids
- If you don't know which medications to stop
- If you don't know how to adjust your insulin
- If you have been told to check your ketones and they are moderate to high
- If you have any of the following that are not getting better: vomiting, diarrhea, stomach pain, frequent urination, extreme thirst, weakness, difficulty breathing or fever

Seasonal Influenza

- Spreads person-to-person via coughing, sneezing, sharing food/drinks
- Touching objects contaminated with flu virus then touching your mouth, eyes or nose
- Spread to others up to 6 feet away
- Can infect others one day before and up to 5 days after symptoms appear



Seasonal Influenza

Prevention

- Influenza vaccination every year
- Cover nose & mouth when coughing/sneezing
- Avoid touching your face
- Wash hands with soap & water or hand sanitizer



Influenza vaccination

- Diabetes significant risk factor for hospitalization
- Vaccination associated with 40% risk reduction in mortality
- Vaccine based on certain flu strains
- Influenza vaccines can be different each year
- Best to get flu vaccine every year



Influenza vaccination

- Standard & high dose influenza vaccines
 - **Standard:** offered to 6 mths of age & older
 - **High dose:** recommended 65+ years; contains 4x's the amount of influenza antigens
- Offered for free in Manitoba late fall to spring
- Protects against four strains
 - Two flu A
 - Two flu B
- Inactive vaccines given by injection



Pneumococcal Infection

- Serious illness caused by germ/bacteria
- Common in very young/old, people with chronic medical conditions
- Can cause ear and sinus infections, pneumonia,
- Can also cause more serious/fatal infections i.e. meningitis (infection of the lining covering the brain) and septicemia (infection of blood)



Pneumococcal Infection

- **Symptoms:** coughing, sneezing, sometimes no symptoms
- Spread person-to-person by coughing, sneezing kissing, sharing food/drinks or other objects that have been in the mouth of a person with the disease



Pneumococcal Infection

Prevention

- Pneumococcal vaccination
- Cover nose & mouth when coughing/sneezing
- Wash hands with soap & water or hand sanitizer (if soap and water not available)



Pneumococcal vaccination

- Pneu-P-23 protects against 23 types
- Available free of charge to MB's 65+ years of age
- Those aged 2 years of age or older with increased risk with one or more of the following medical conditions or lifestyle factors:
 - May require 2nd dose of Pneu-P- 23
 - Medical/lifestyle conditions listed next slide



Pneumococcal vaccination

Medical conditions or lifestyle factors:

- Alcoholism
- cerebrospinal fluid leak
- cochlear implants
- congenital immunodeficiencies involving any part of their immune system
- Diabetes
- heart or lung disease
- Hemoglobinopathies
- HIV infection
- Homelessness
- Illicit drug use
- Immunocompromising therapy
- Kidney disease
- Liver disease
- Malignant neoplasms
- Neurological conditions that impair clearance of oral secretions
- No spleen/spleen not working properly
- Solid organ, islet or cell transplant



Key messages for people with diabetes

- You should receive routine vaccinations as recommended for anyone with or without diabetes
- Check with your doctor if you are up to date
- You should receive:
 - **Influenza vaccination (flu shot):** every year
 - **Pneumococcal vaccination:**
 - Initially when 18 years and over
 - Again when over age of 65 years



Summary

We reviewed:

- Managing health during illness
- Seasonal influenza vaccination
- Pneumococcal vaccination





Thank You

Any questions?

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