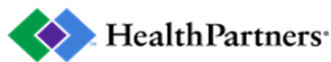



MN Health Plans Collaborative



1

The Managed Care Organization Diabetes Performance Improvement Collaborative has launched a new three-year PIP as of 1/1/2021 and will run through 2023. The project aims to improve the comprehensive diabetes care and services for Seniors and SNBC members, focusing on closing the gaps in health care disparities within our populations. Care Coordinators/Case Managers have an essential role in educating, support and assist members in setting and achieving health goals to improve their diabetes care.

2



April 24, 2023

Oral Health Considerations for People with Diabetes

Dr. Jesse Grantz from Fairmont Center

Photo: Headwaters of the Mississippi in Itasca State Park

3

Agenda



- Brief Overview of Diabetes
- Clinical Management
- Oral Health Impacts
- Lifestyle Management
- Questions

4



Hyperglycemia

- Occurs when blood glucose levels are abnormally high.
- Primary symptom of diabetes
- Causes:
 - Low insulin levels, which can occur either when insufficient insulin is used or when insulin is not used efficiently by the body
 - Insulin dependent diabetes vs. non-insulin dependent
 - Eating more than planned or exercising less than planned according to the amount of insulin taken
 - Stress, either physical (e.g., illness-related or medical/dental procedure-related) or emotional

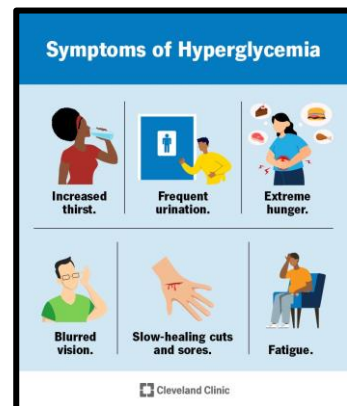
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Hyperglycemia

Symptoms of hyperglycemia include:

- High levels of sugar in the urine
- Frequent urination
- Increased thirst
- Fatigue
- Blurred vision



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Hyperglycemia

- Untreated hyperglycemia can damage the following:
 - Cardiovascular system
 - Circulatory system
 - Nervous system
 - Vision
- It can also result in slowed wound healing
- Extreme or prolonged hyperglycemia can cause a life-threatening condition called ketoacidosis

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Hypoglycemia

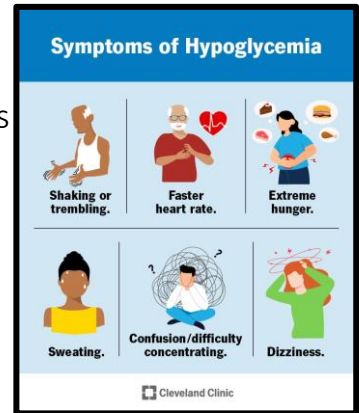
- Low concentration of glucose in the bloodstream
- May be caused by:
 - Adverse effect of insulin or other diabetes medications
 - Disruption in food intake (timing of a dental appointment, illness/nausea, vomiting, diarrhea, skipping or delaying a meal, etc.)
 - An unexpected/unplanned increase in physical activity or stress

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Hypoglycemia

- Symptoms of mild-moderate hypoglycemia:
 - Shakiness, sweating, fast heartbeat, dizziness, lightheadedness, hunger, nervousness, numbness of the lips or tongue, sleepiness, blurred vision, trouble concentrating, confusion, paleness, irritability, argumentative, combative
- Symptoms of severe hypoglycemia
 - Unable to eat/drink, seizures/convulsions, unconsciousness



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Clinical Considerations

- Ensure that the patient has eaten an adequate breakfast prior to the appointment
- Ensure that the patient has access to insulin if they are insulin-dependent
- If a patient is having symptoms of low blood sugar
 - Give high sugar drink like orange juice
 - Give glucose tablets or gel from emergency kit
- Avoid sudden dental chair movements that can make a patient feel light-headed

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Oral Health and Diabetes

- Oral manifestations of uncontrolled diabetes can include:
 - Xerostomia (dry mouth)
 - A burning sensation in the mouth
 - Delayed/impaired wound healing
 - Increased incidence and severity of infections
 - Secondary infection with candidiasis
 - Parotid salivary gland enlargement
 - Gingivitis and/or periodontitis

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Diabetes and Periodontitis

- Periodontal disease is commonly seen in people with diabetes, and is considered a complication of diabetes
- Bidirectional relationship - hyperglycemia affects oral health while periodontitis affects glycemic control
- Studies have confirmed that periodontitis is associated with:
 - Higher HbA1c levels than non-diabetic people and people with Type 2 diabetes
 - Worsened complications from diabetes in people with type 2 diabetes
 - More complications in persons with type 1 diabetes

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Frequently Utilized Services

- D1110 - Prophylaxis (6-month standard recall, or 3-month recall)
- D4341/4342 - Periodontal scaling and root planing
- D1206 - Topical fluoride varnish
- D1354 - Caries Arresting Agent (Silver Diamine Fluoride)
 - Used in high-risk pediatric patients and older adults
- D9930 - Treatment of Post-surgical complications
- D4210/4211 - Gingivectomy
 - Removal of gingival tissue due to hyperplasia or inflammation when it interferes with chewing function



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Risk Factor and Disease Management

- Chronic inflammation is a risk factor for developing diabetes
- Reduce inflammation through diet and exercise
- Exercise releases anti-inflammatory chemicals into the body and makes muscle cells more responsive to insulin
- This increased insulin sensitivity can reduce chronic inflammation
- Even moderate exercise like walking can have an impact

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Nutrition Recommendations

Anti-inflammatory

- Healthy fats: Omega-3 fatty acids, olive oil, avocado, walnuts
- Many fruits and vegetables
- Citrus fruits
- Leafy greens
- Ginger
- Berries
- Tomatoes

Pro-inflammatory

- Trans-fatty acids
- Shortening
- Animal fats
- Red meat
- Full-fat dairy products

Note: An anti-inflammatory diet by itself is not preventative for diabetes, unless it leads to needed weight loss. Weight loss and physical activity can reduce systemic inflammation which is important for reducing the risk of type 2 diabetes.

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Lifestyle Recommendations

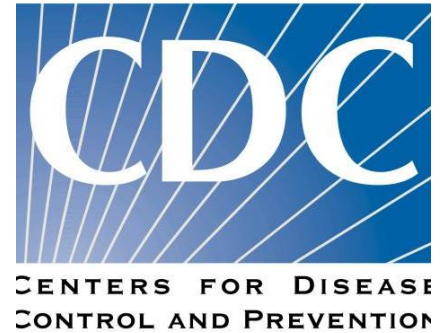
- Stay Hydrated!
- Saliva production can be reduced with diabetes and glucose concentration in saliva may be increased
- This can lead to accelerated bacterial growth, more plaque accumulation, and rapid tooth decay
- Avoid smoking or vaping, which can increase symptoms of dry mouth
- Chewing sugar-free gum can help increase saliva production
- Other saliva replacers are available for moderate to severe dry mouth



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CDC Recommendations

- Brush your teeth at least twice a day with fluoride toothpaste.
 - Rx strength fluoride toothpaste or gel if needed
- Floss your teeth at least once a day
- Tell your dentist if you have diabetes
- If your gums are red, swollen, or bleed easily, see your dentist. These may be signs of gum disease. Other signs include dry mouth, loose teeth, or mouth pain
- If you smoke, quit. Smoking increases your risk of gum disease and can worsen your diabetes.



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Product References

(Not Brand *Recommendations*)

Dry mouth relief:
Pastes, gels,
rinses, lozenges

Rx Fluoride
Toothpaste

Chlorhexidine
antibacterial
mouth rinse

Xylitol-sweetened
chewing gum



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Team Approach

- Coordination with the patient's physician may be necessary to determine the patient's health status and whether planned dental treatment can be completed safely and effectively
- Physicians should make laboratory test results available to the dentist upon request and inform the dentist of any diabetic complications related to the patient prior to dental procedures
- Uncommonly, the physician may need to adjust the patient's diabetes medication to help sustain metabolic control before, during, and after surgical procedures
- Patients with diabetes should obtain regular medical and dental care

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Comments and Questions?

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Sources

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- <https://www.ada.org/publications/cdt/icd-and-cdt-codes>
- <https://my.clevelandclinic.org/health/diseases/11647-hypoglycemia-low-blood-sugar>

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Thank You!

[Evaluation Link](#)

Certificate of Participation – upon completion of Evaluation

Recording - Recording can be found at the [Performance Improvement Project - Diabetes Page on the Stratis Health Website](#)

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