

MODULE

7



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LEARNING ABOUT MEDICAL CARE

I. ABCs OF DIABETES CONTROL

A. A1c

1. Glycosylated hemoglobin or HbA1c.
2. Indicates average glucose levels over 8-12 weeks.
3. Perform at initial assessment (diagnosis) and during continuing care (control).
4. Goal: < 7.0%
5. Test: Twice a year in controlled patients; every 3-6 months in less controlled or changing treatment.

B. Blood Pressure

1. High blood pressure common in people with diabetes; increases over time.
2. Goal < 140/90 (lower if diabetic nephropathy).
3. Test: every visit
4. Management: diet, exercise, two or more medications (diuretic, ACE inhibitors, ARBs).

C. Blood Pressure – Kidney Function

1. Albuminuria:

- a. Normal: < 30 mg of albumin/gm creatinine per 24 hours.
- b. Persistent albuminuria: ≥ 30 mg/24 hours.
- c. Test: Albumin/creatinine ratio in random spot urine collection.
- d. When: at diagnosis of diabetes, then yearly. Also, if blood pressure is too high.

2. Serum creatinine test

- a. Goal: ≥ 90 ml/min per 1.73 m^2 of body surface area.
- b. Test: blood sample; estimates glomerular filtration rate.
- c. When: at diagnosis of diabetes, then yearly.

D. Cardiovascular Disease (CVD)

1. Goal: decrease risk of CVD and stroke.
2. Management:
 - a. Smoking cessation
 - i. Assess at diagnosis and regularly.
 - ii. Treatment: counseling (use quit lines); nicotine replacement, etc.
 - iii. Not reimbursed by Medicare.
 - b. Daily aspirin therapy (doctor recommended only. Clopidogrel as alternative).
 - i. When: 100 – 325 mg, beginning at age 40.
3. When: Assess at diagnosis and every visit.

E. Cholesterol

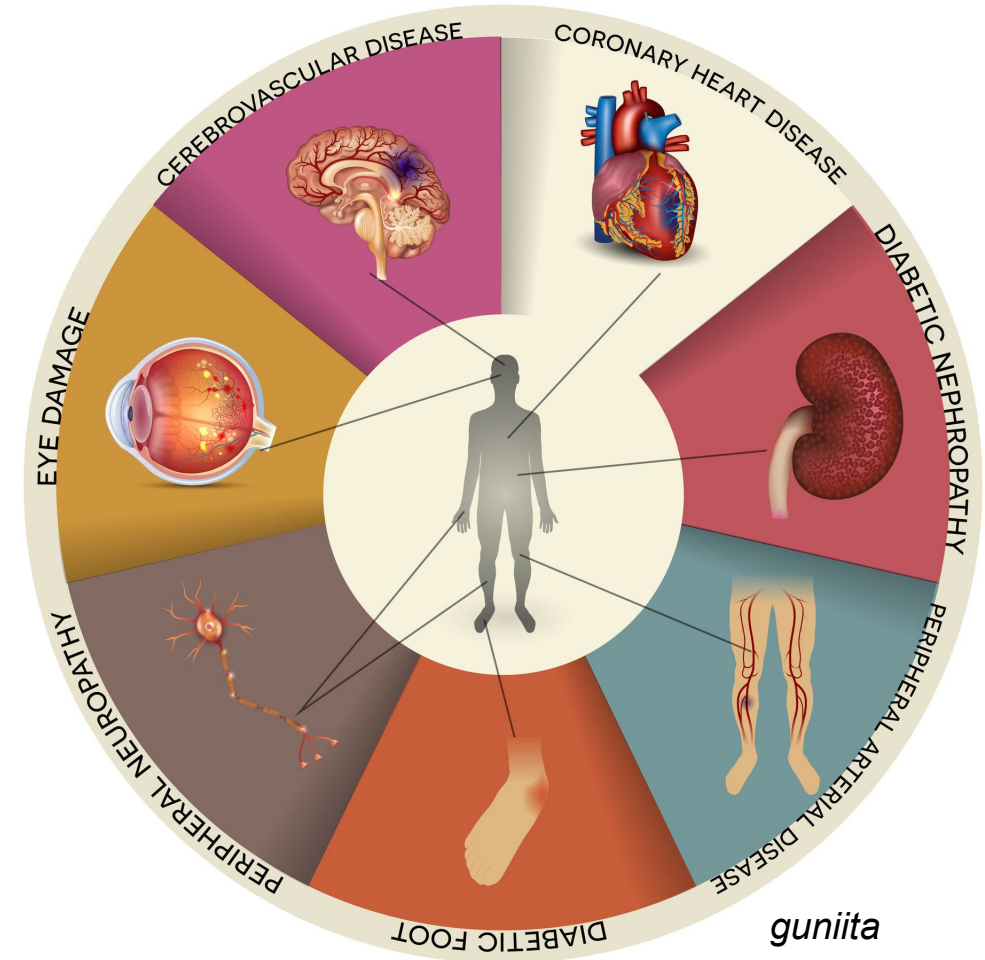
1. High Cholesterol: common in people with diabetes and contributes to CVD.
3. Test: Lipids profile
4. When: yearly in most patients; every 2 years in low-risk.
5. Management: diet, medication.
6. Goals:

LDL	< 100 mg/dL (< 70 in high risk of CVD)
HDL (males)	> 40 mg/dL
HDL (females)	> 50 mg/dL
Triglycerides	< 150 mg/dL

II. DIABETES EDUCATION

A. When It's Needed

1. A1c above 8 percent.
2. Within 90 days of diagnosis.
3. When complications develop.
4. When treatment strategies are changed.
5. Within first month after hospitalization.
6. Annually
7. Reimbursed by Medicare (10 hours initially and 2 hours annually).



III. MONITORING YOUR BODY

A. Dental Care

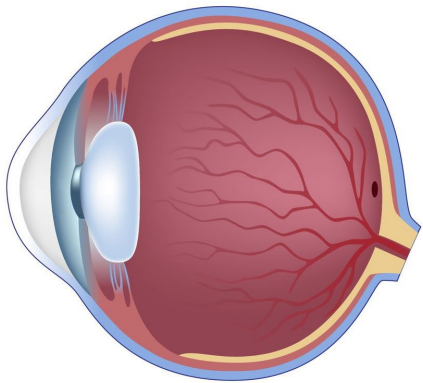
1. Goal: Prevent tooth loss and periodontal disease. Tooth loss prevents chewing of high fiber foods.
2. Test: Oral health screening.
3. When: For persons with teeth, every 6 months; for persons without teeth, every 12 months.
4. Management:
 - a. Regular brushing
 - b. Flossing
 - c. Massaging of gums
 - d. Drink water



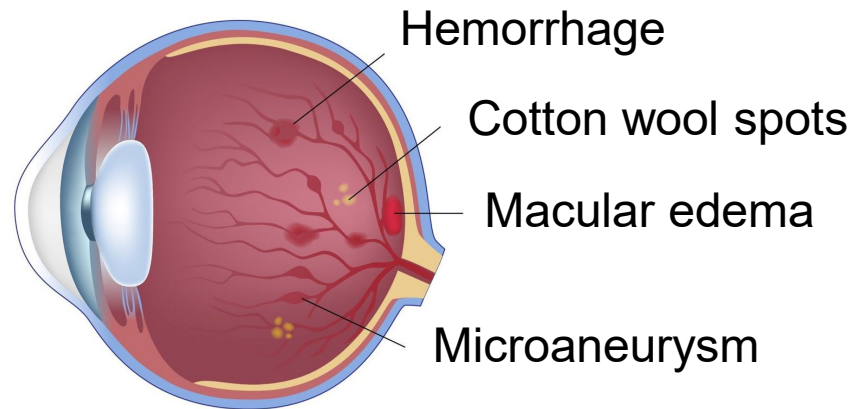
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B. Eye Examination

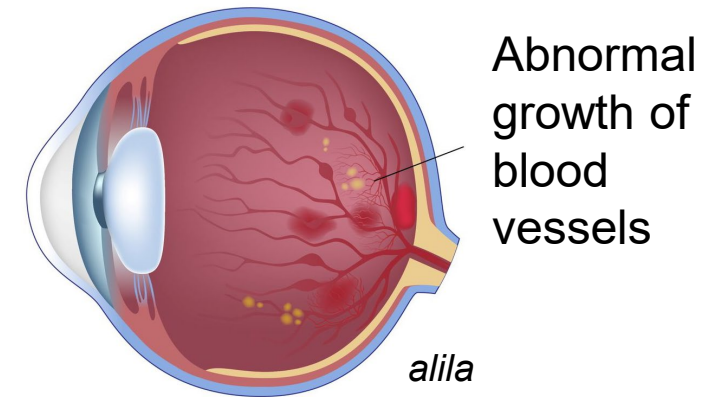
1. Retinopathy: most common cause of blindness in adults.
2. Goal: to prevent retinopathy or detect it early.
3. Test: Dilated eye exam by ophthalmologist (MD) or optometrist (DO).
4. When: at diagnosis of diabetes, then yearly.



NORMAL



**NONPROLIFERATIVE
DIABETIC RETINOPATHY**



**PROLIFERATIVE
DIABETIC RETINOPATHY**

C. Foot Care

1. Goal: Prevent ulcerations and amputation.
2. Test: Inspect feet with shoes and socks off; yearly comprehensive exam that includes:
 - a. Mono-filament test
 - b. Visual observation
 - c. Tuning fork
 - d. Palpation
3. When:
 - a. Inspection at home: daily.
 - b. By the doctor: at every visit.
 - c. Comprehensive: yearly.
4. Reimbursed by Medicare.



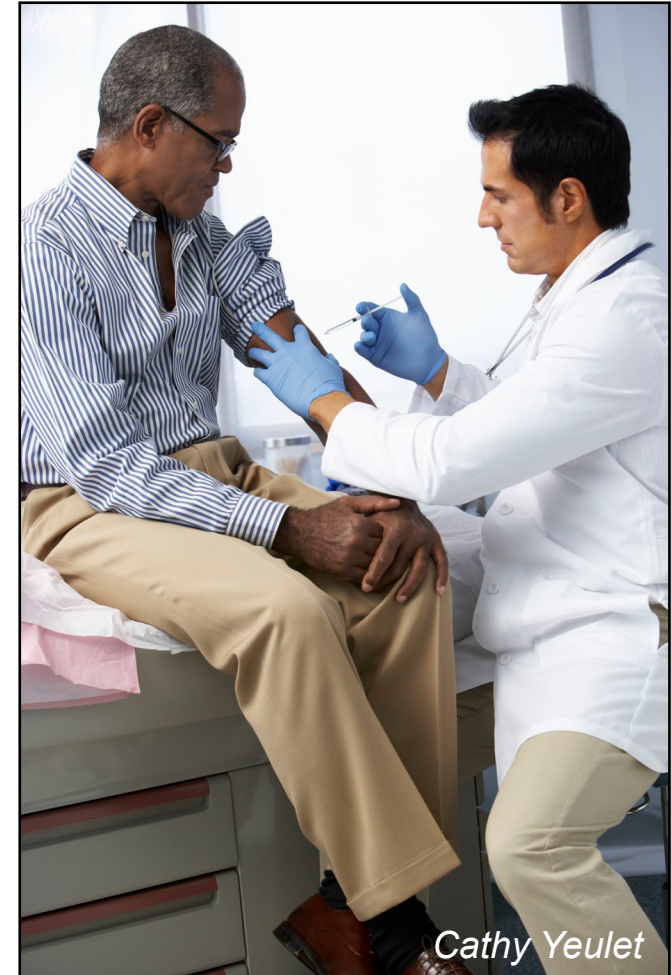
D. Glucose Monitoring

1. Self-monitoring is the cornerstone of care.
2. Goal: to maintain control of blood sugar.
3. When: 2-4 times/day or as recommended.
4. At doctor's visit: review medicines & frequency of low blood sugar.
5. Why? A person with diabetes should use the glucose meter to control their blood glucose to prevent hyperglycemia and hypoglycemia.

Fasting values in diabetes	70 – 130 mg/dL
1-2 hours after eating (diabetes)	< 180 mg/dL
Hypoglycemia	< 80 mg/dL
Hyperglycemia	> 130 mg/dL

E. Immunizations

1. Goal: Reduce risk of complications.
2. Influenza Vaccine: Annually.
3. Pneumococcal Vaccine: once, and one re-vaccination for those 65 and older if vaccine was received more than 5 years before. Also revaccinate in immuno-compromised conditions.
4. Tetanus: Every 10 years.
5. Hepatitis B
6. Shingles for persons over 50



Cathy Yeulet

F. Indicators for Specialty Care

Patients may need specialty care in these areas:

1. Endocrinologist: if standards of care not met.
2. Ophthalmologist: if person has signs of retinopathy, macular edema, glaucoma, or advanced cataracts.
3. Nephrologist: if person not achieving blood pressure goals.
4. Psychologist/Psychiatrist: if person has signs and symptoms of depression.
5. Cardiologist: if person has signs/symptoms of CVD.
6. Neurologist: if person has pain, muscle weakness, loss of sensation.
7. Podiatrist: if person has foot ulcers or claudication.
8. Community Health Worker: for community level engagement and support in managing diabetes.

G. Know the Numbers and Targets

If persons with diabetes maintain these values, they will be in good control of diabetes and prevent complications.

A1c test	Less than 7%
Blood pressure	Less than 140/90 mmHg
LDL cholesterol	Less than 100 mg/dL

H. Diabetes Self-Management

1. Have a meal plan (when, what and how much).
2. Exercise moderately (walk 30 minutes a day).
3. Check blood glucose frequently – as planned.
4. Take medications properly.
5. Check and take care of the feet and skin.
6. Get and keep doctor appointments and lab tests.
7. Talk to your health educator and health promoters.



I. Tracking the use of Medications

1. It is important in controlling diabetes to use all medications as they are prescribed.
2. Review and understand all prescribed medications.
3. Determine that patients actually use all prescribed medications and not just buy it.
4. Refill all medications in a timely manner.



III. Insulin Storage

1. Insulin is best kept cold or refrigerated to keep from spoiling (36 – 46 degrees F).
2. Do not use frozen insulin.
3. Insulin can be kept at room temperature for 28 days. (Avoid spaces >80 degrees F)
 - a) Insulin products contained in vials or cartridges supplied by the manufacturers (opened or unopened) may be left unrefrigerated at a temperature between 59°F and 86°F for up to 28 days and continue to work.
4. Opened insulin should be thrown out after 28 days.
5. Insulin will begin to break down and be less potent.
6. Insulin dated more than 30 days past expiration date should not be used. Consult with medical provider.

This concludes Module 7: Learning About Medical Care. For more information on this topic, please see the curriculum.



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