Disease Management: Type 2 Diabetes

Maintain treatment goals:

- Nutrition
  Initial consult with dietician and routine follow-ups as needed; recommend patient keep a carbohydrate source with them at all times; provide education on consistent eating patterns

- Exercise
  Review home exercises guidelines with patient; exercise within cardiac rehab recommendations (see listed references for more detailed exercise guidelines)
  Injection site: Inject insulin in abdomen if exercise will begin within 30 minutes to avoid hypoglycemia (glucose is used more rapidly if insulin is injected in active muscles)
  Follow your facility's policy or the AACVPR guidelines (below) for initiating exercise and providing CHO:
  Patients taking oral hypoglycemic agent or insulin should have glucose checked before and after exercise for 6 sessions to establish level of glucose control and exercise response; continue checks if <90 mg/dL or ≥300 mg/dL are recorded
  If pre-exercise blood glucose ≥300 mg/dL:
    - Type 1 = no exercise
    - Type 2 and symptomatic = no exercise
    - Type 2 and asymptomatic = exercise
    - Contact physician in all cases

  If pre-exercise blood glucose 100 mg/dL or less:
    - Provide snack with carbohydrates
    - Exercise if no symptoms

  If post-exercise blood glucose 90 mg/dL or less:
    - Provide snack with carbohydrates

- Alcohol and tobacco use
  Address need for limitation or cessation

- Labs
  Recommend monitoring A1C every 3 months if newly diagnosed, therapy has changed, or not meeting glycemic goals
  Recommend monitoring A1C every 3-6 months if meeting treatment goals
  Recommend A1C goal of 7% (may be more or less stringent depending on history, complications, physician recommendations, etc.)
  Make sure other labs are current and review with patient: lipids, metabolic panel, etc.
  Help arrange f/u if needed; make sure labs are current if medication/health status changes

- Sign/symptoms
  Review symptoms of hypo-/hyperglycemia, how to prevent and treat, educate on consequences of chronic hyperglycemia

- Home glucose monitoring
  Review home blood glucose readings at each visit
  Educate on proper glucometer usage, have patient demonstrate proper technique
  GOAL: 70-130 mg/dL fasting, <180 peak post-prandial (These are general guidelines. Patients should follow their physician's recommendations)

- Blood pressure
  Monitor BP each session

- Medication
  Check for Metformin, insulin, or other DM medication prescriptions; provide education on compliance and how to use glucose-lowering medications; refer to pharmacist for medication management consult as necessary; review proper use and disposal of needles and syringes

Annual assessment of complications: (Should verify that patient is having these done yearly)

- Targeted annual history and physical exam
- Specialist dilated eye exam
- Renal assessment
- Comprehensive foot exam with risk assessment
- Cardiovascular and cerebrovascular complication assessment
- Special considerations

Treatment and referral for complications: (Contact physician if problems arise that need attention)

- Nephropathy
- Neuropathy
- Retinopathy
- Cardiovascular and cerebrovascular disease
- Peripheral vascular disease

Treatment goals not met:

- Consider referral to diabetes health team or specialists
- Assess patient adherence (biggest problems are understanding and adherence)
- Evaluate for depression

References

American Association of Cardiovascular and Pulmonary Rehabilitation (2004). *Guidelines for cardiac rehabilitation and secondary prevention programs* (4th ed.). Champaign, IL: Human Kinetics.

Institute for Clinical Systems Improvement Ongoing Management Algorithm. *Diagnosis and Management of Type 2 Diabetes Mellitus in Adults* (14th ed./July 2010).

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