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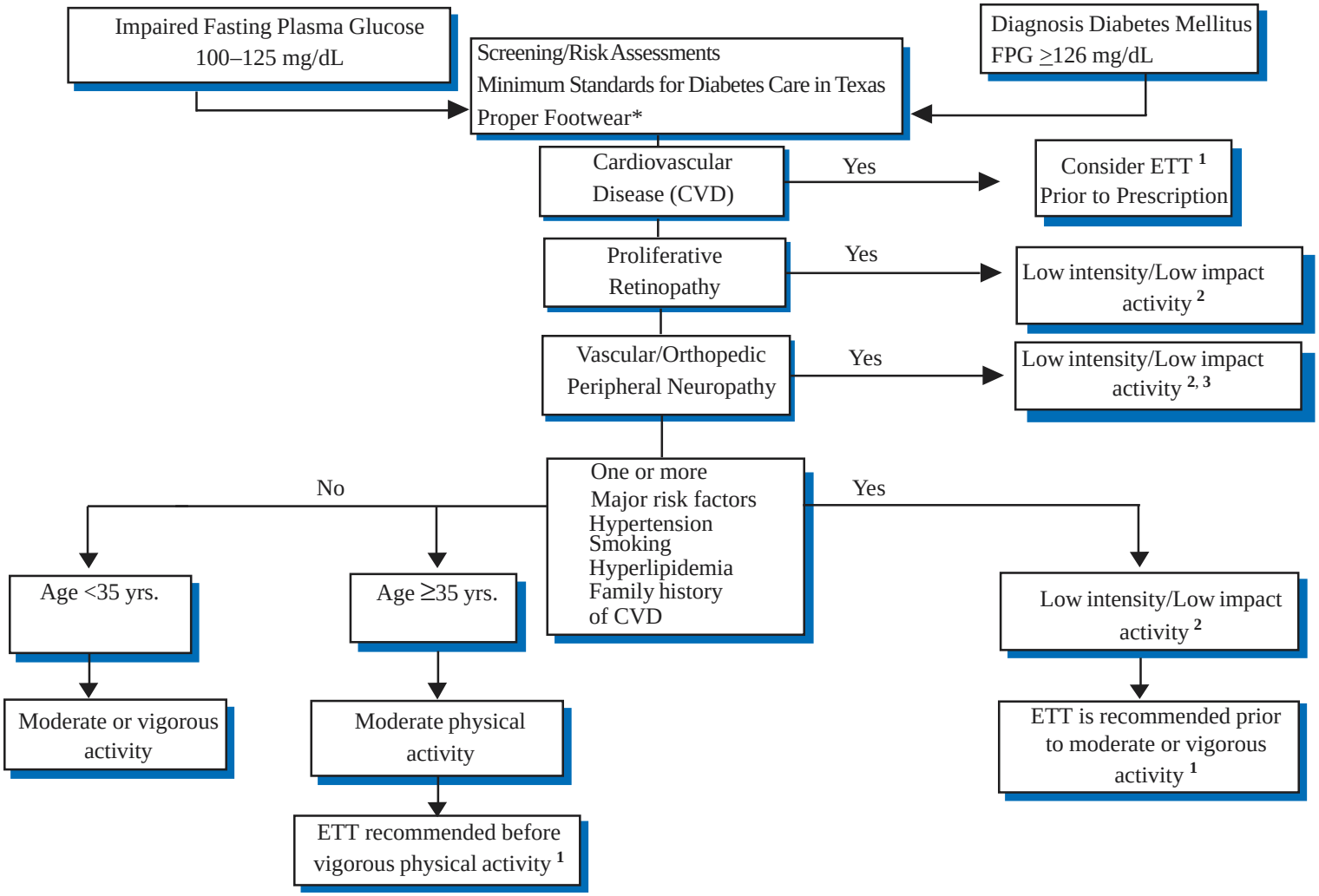
EXERCISE ALGORITHM
TYPE 2 DIABETES PREVENTION & THERAPY



[1]Recommendation for Exercise Tolerance Test

Based on the clinical context in which they occur, if your patients have any of the following signs or symptoms of cardiovascular or metabolic disease, consider an exercise tolerance test (ETT) before recommending moderate or vigorous activity.

- Pain, discomfort (or other anginal equivalent) in the chest, neck, jaw, arms, or other areas that may be ischemic in nature
- Shortness of breath at rest or with mild exertion
- Dizziness or syncope
- Orthopnea or paroxysmal nocturnal dyspnea
- Ankle edema
- Palpitations or tachycardia
- Intermittent claudication
- Unusual fatigue or shortness of breath with usual activities
- Any macrovascular disease
- Any microvascular disease
- Peripheral vascular disease

[2] Moderate activity is recommended to achieve physiologic improvement.

[3] Orthotics as indicated.

*Proper footwear (socks, shoes, insoles) to prevent injury.

If your patients are "apparently healthy" and have fewer than two major risk factors for cardiovascular disease (CVD), then they are categorized by age.

- For men and women under 35 yrs. of age, there are no limitations. They can safely begin or continue a program of moderate or vigorous activity.
- If they exceed the age limit (≥35 yrs.), it is safe to limit your recommendations to moderate activity (55% to 70% maximum heart rate) for both genders. Patients in this group who wish to participate in vigorous or competitive activities should be considered for an ETT screening.

If your patients have one or more major risk factors for cardiovascular disease, they should undergo an ETT before beginning a moderate exercise program. It is important to underscore the fact that the majority of your patients, regardless of risk factors, can and should be encouraged to start or continue a program of regular moderate physical activity.

See web site (http://www.texasdiabetescouncil.org) for latest version and disclaimer.
See reverse side for other considerations and precautions.

Texas Diabetes Council
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Considerations for Prescribing Physical Activity for Type 2 Diabetes Prevention and Treatment

Significant health benefits can be obtained by including an accumulated 30 minutes of moderate physical activity on most, if not all, days of the week.

Regular physical activity lowers the risk of developing Type 2 diabetes.

1996 Surgeon General's Report on
Physical Activity and Health

"Regular physical activity" includes all movements in everyday life, including work, recreation, exercise, and sporting activities.

Low Intensity/Low Impact Activity - includes activities like walking, housework, light gardening, light yard work, and social dancing

Moderate Intensity Activity - includes activities like brisk walking, vigorous gardening, slow cycling, aerobic dancing, doubles tennis, or hard work around the house.

Precautions for Exercise Prescription

Retinopathy

Patients with proliferative diabetic retinopathy have abnormal hemodynamic responses of the cerebral and ophthalmic circulation both at rest and with exercise. **Vigorous physical activity, especially isometric contractions, produces significant increases in blood pressure and can accelerate proliferative diabetic retinopathy with significant risk of retinal and vitreal hemorrhage and detachment.** Low impact/low intensity physical activity recommended.

Orthopedic Problems

Neuropathy and peripheral vascular disease can predict unnoticed foot injury. Footwear that relieves forefoot plantar pressure by up to 50% has been shown to be effective in preventing the recurrence of foot ulcers when worn for more than 60% of the day (Peirce, N. 1999. British Journal of Sports Medicine)

Guidelines for Exercise Prescription

1. Appropriate attire for physical activity, i.e., footwear - socks, shoes, insoles/orthotics.
2. Do not exercise at peak hypoglycemic times.
3. Monitor blood glucose before and during exercise if symptoms of hypoglycemia occur with exercise.
4. Wear a form of personal identification or medical alert.
5. Carry fast acting carbohydrate, i.e., sucrose and glucose products.
6. Examine feet after exercise.
7. Maintain adequate hydration.