

The Older Adult with Diabetes and The Busy Clinicians



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KEYWORDS

• Diabetes • Older adult • Geriatrics • Frailty • Life expectancy

KEY POINTS

- Older adults are more prone to diabetic complications and hypoglycemia.
- Target hemoglobin A1c level needs to be more relaxed for frail older adults.
- Lifestyle interventions are more effective in older adults.
- Geriatric syndromes adversely affect diabetes care.
- A team approach is vital.

OVERVIEW

Diabetes is a common problem in older adults (defined as >65 years of age). About 1 in 4 older adults, or more than 11 million individuals, in the United States who are 65 years of age and older are affected. Fueled in part by the obesity epidemic, this number is projected to double in the next 20 years and quadruple by 2050.^{1,2} Diabetes takes a big toll on patients and families. Diabetes and its complications lead to higher mortality and nursing home placements in older adults. After adjusting for age and sex differences, patients with diabetes spend 2.3 times more for their medical care compared with those without diabetes.³ This article focuses on how to approach older diabetics in terms of patient selection, hemoglobin A1c (A1c) goal setting, and being aware of the interplay between geriatric syndromes that can negatively affect these patients.

PATHOPHYSIOLOGY

Although increasing numbers of patients with type 1 diabetes live to be older, they comprise a minority of older adults with diabetes. More than 90% of diabetes in older adults is type 2, which is caused by insulin deficiency. Increasing age can adversely affect pancreatic islet function and islet cell proliferative capacity directly (**Fig. 1**). Older adults are also more susceptible to increased fat deposition, low muscle

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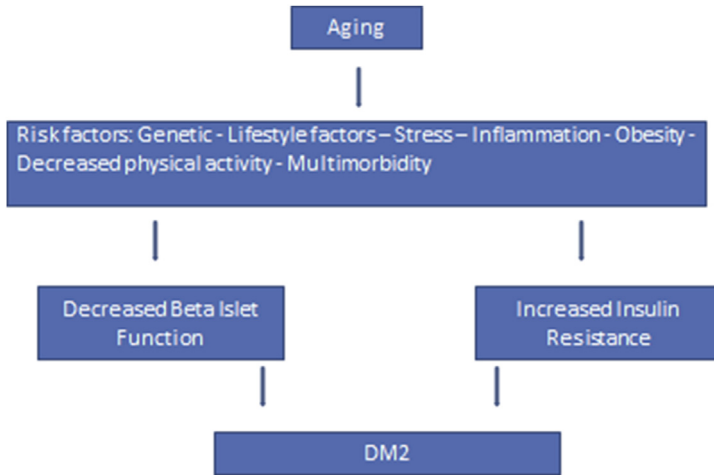


Fig. 1. Pathophysiology of diabetes in older adults. DM2, diabetes mellitus type 2.

mass, and physical inactivity. These factors can indirectly increase insulin resistance as well as decrease beta islet function.⁴ This heightened susceptibility is one of the reasons why older adults respond disproportionately better with lifestyle interventions.⁵

SCREENING AND DIAGNOSIS

Given the high prevalence of diabetes in older adults, screening is recommended every 1 to 3 years in all adults starting from age 45 years. Identifying diabetes early could decrease the incidence of complications in older adults. It is ideal that the screened individuals have a long enough life expectancy to benefit from interventions. According to the American Diabetes Association in the absence of classic symptoms of hyperglycemia or hyperglycemic crisis coupled with a random plasma glucose level of ≥ 200 mg/dL, the following three measures such as a fasting plasma glucose level of ≥ 126 mg/dL, 2 hour oral glucose tolerance test ≥ 200 mg/dL, or an A1C level of $\geq 6.5\%$ must be demonstrated on two separate occasions to confirm the diagnosis.

Postprandial hyperglycemia is a prominent characteristic in older adults.^{6,7} Therefore when other criteria are relied on, like fasting plasma glucose or A1c level, up to one-third of the cases could be missed in older adults.⁸ Medicare does not cover A1c for screening purposes unless other risk factors, such as family history or hyperglycemia, are present.

DIABETIC COMPLICATIONS IN SPECIFIC SUBPOPULATIONS OF OLDER ADULTS

Older adults with diabetes can be divided into 2 distinct subpopulations based on the age at onset. Some are diagnosed with diabetes early in life, such as in middle age, leading to long-standing diabetes, versus being incidentally found after they turn 65 years old. These two distinct subpopulations show differing demographics and clinical characteristics (Table 1).⁹ The older onset of diabetes is seen more commonly in non-Hispanic white people; they tend to have lower mean A1c levels and less likely to be using insulin. The duration of diabetes seems to correlate with certain microvascular complications. For instance, retinopathy occurs more frequently in long-standing diabetes, and it increases progressively with increasing duration of diabetes. Poor

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