

# Diabetes

Diabetes in the elderly is metabolically distinct from diabetes in younger people and the approach to therapy should be different. **Healthy elderly** people with diabetes should be treated to achieve the same glycemic, blood pressure and lipid targets as younger people with diabetes <sup>(2)</sup>

**Prevention of hypoglycemia** in the **frail elderly**, should take priority over attainment of glycemic targets because the risks of hypoglycemia are magnified in this patient population. <sup>(2)</sup> Risks include falls, fractures, ventricular arrhythmias, seizures, coma and death. While avoiding symptomatic hyperglycemia, glycemic targets should be A1C (glycated hemoglobin)  $\leq 8.5\%$  and fasting plasma glucose (PG) or preprandial PG 5.0–12.0 mmol/L, depending on the level of frailty. <sup>(2)</sup>

## Why is it important?

Diabetes is an important indicator of population health. <sup>(4)</sup> With the growing numbers of seniors, the prevalence of diabetes is increasing: 1 in 6 senior males and 1 in 7 females have diabetes. <sup>(4)</sup> By 2030, the number of individuals  $\geq 65$  yr. with diabetes is expected to increase 2.3 fold. <sup>(3)</sup> Chronic hyperglycemia is associated with significant long-term microvascular and macrovascular complications. Prevalence of complications is higher among the elderly with diabetes. <sup>(1)</sup>

## Key Considerations <sup>(4)</sup>

- Follow the **ABC's** for all patients with diabetes for vascular protection:  
**A**= A1C – optimal glycemic control;  
**B**= BP – optimal blood pressure control ( $< 130/80$  mmHg);  
**C**= Cholesterol – LDL-C  $\leq 2.0$  mmol/L if decision made to treat;  
**D**= Drugs to protect the heart and kidneys (even if the baseline blood pressure or LDL-C is already at target);  
**E**= Exercise / Eating – Regular physical activity, healthy eating, achievement and maintenance of healthy body weight;  
**s** = Smoking cessation
- Follow the **5 R's** in team care and organization of care: **Recognize** (consider & screen risk factors); **Register** (develop a registry of all patients with diabetes); **Resource** (support self-management through the use of an interprofessional approach); **Relay** (information between all team members to support coordinated care); **Recall** (develop a system for timely reviews and assessment of goals and targets)
- Regimens should be tailored to the individual's treatment goals, lifestyle, diet, age, general health, motivation, hypoglycemia awareness status and ability for self-management. Promote patient self-management and S.M.A.R.T. ( Specific, Measurable, Achievable, Realistic, Timely) goals
- For the frail elderly or those with limited life expectancy, balance the potential treatment benefits against potential harm (i.e. Hypoglycemia, hypotension, falls). Target A1C  $\leq 8.5\%$
- In elderly people, if mixture of insulin is required, the use of premixed insulin and prefilled insulin pens should be used to reduce dosing and minimize errors to potentially improve glycemic control
- Long-acting basal analogues (i.e. detemir, glargine) are associated with a lower frequency of hypoglycemia than conventional insulin in this age group.
- Glyburide and Sulphonylureas should be used with caution as the risk of hypoglycemic events increases exponentially with age.
- In elderly people with cognitive impairment, strategies should be used to strictly prevent hypoglycemia, which include the choice of antihyperglycemic therapy and less stringent A1C target. The clock drawing test may be used to predict which elderly subjects will have difficulty learning to inject insulin
- Elderly people with type 2 diabetes should perform aerobic exercise and/or resistance training, if not contraindicated, to improve glycemic control
- In elderly nursing home residents, regular diets may be used instead of “diabetic diets” or nutritional formulas

## References

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