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# ELDER CARE

A Resource for Interprofessional Providers

## Diabetes - Special Considerations for Older Adults

Jessie Pettit, MD, University of Arizona College of Medicine

Diabetes is increasingly common among older adults, affecting more than 1 in 4 Americans over the age of 65. Older adults with diabetes, and particularly African Americans and Hispanics, are more likely than other diabetics to suffer diabetic complications such as leg amputations, myocardial infarctions, vision problems, and kidney disease. Older adults are also more likely to have complications from hypoglycemia.

This Elder Care highlights key guideline recommendations from the American Diabetes Association, the American Geriatrics Society (AGS), and the American Heart Association/American College of Cardiology (AHA/ACC) for management of older adults with type 2 diabetes.

### Glycemic Control

The glycemic control target for otherwise healthy older adults with type 2 diabetes is a hemoglobin A1c level <7.5%. However, the risks of hypoglycemic complications accompanying such tight control are thought to outweigh benefits for older adults with a life expectancy of less than 5 years, and for those with advanced diabetic complications. Therefore, a less-stringent A1c goal of <8% is more appropriate for these individuals. For persons with significant dementia, and for those in long-term care or with end-stage chronic illnesses, the A1c goal is <8.5%. Table 1 outlines A1c goals based on health status.

A1c should be measured at least every 6 months and more frequently if patients are symptomatic or not at goal. If the A1c level is stable over several years, annual measurements are appropriate.

Table 1. Glycemic Control Goals for Older Adults	
Health Status	A1c Goal
Otherwise healthy with no life-limiting illness	<7.5%
Frailty or limited life expectancy	<8.0%
Significant dementia or other end-stage disease	<8.5%

### TIPS FOR MANAGING DIABETES IN OLDER ADULTS

- The goal for glycemic control in healthy older adults with diabetes is an A1c <7.5%, with less stringent goals (<8.0-8.5%) for patients with frailty, limited life expectancy, and other chronic conditions.
- Unless contraindicated or not tolerated, most older adults with diabetes should be on a statin for cardiovascular protection and an ACE inhibitor or ARB as part of their blood pressure control regimen. Good blood pressure control and use of statins reduce the risk of cardiovascular events more than tight glycemic control.
- Aspirin therapy is recommended for those with cardiovascular disease, but should be used with caution in those over 80 because of the risk of bleeding. Routine use of aspirin for primary prevention is not recommended for older adults.

### Prescribing Diabetic Medications

Metformin can cause gastrointestinal side effects and weight loss and may not be appropriate for frail older patients. While the risk of lactic acidosis with metformin is low, the dose should be reduced to avoid lactic acidosis if the estimated glomerular filtration rate (eGFR) is 30-60 mL/min, and stopped if the eGFR is <30 mL/min.

Sulfonylureas, though inexpensive, have a high risk of causing hypoglycemia. If used, glipizide is preferable to glyburide because glipizide is safer in renal impairment and it has a shorter half life. Glyburide should not be used if eGFR is <60 ml/min.

Dipeptidyl peptidase-4 (DPP-4) inhibitors decrease postprandial blood glucose levels, have a low risk of hypoglycemia, and are well tolerated. They are, however, expensive. Glucagon-like peptide-1 agonists work similarly to DPP-4 inhibitors, but are also costly and can cause nausea and weight loss.

Insulin therapy can be considered for selected patients, though insulin injections often are not practical for older individuals with vision problems or hand arthritis that limits the dexterity needed to draw up and inject the drug. Prefilled insulin pens can be an excellent option for older adults with such problems, if covered by insurance.

Overall, inexpensive medications with simple dosing schedules, short half lives, and fewer side effects and drug interactions are the best choices for older adults.

### Blood Pressure Control

Current guidelines recommend a target blood pressure of <140/80-90 mmHg for most older adults who have diabetes, and <150/90 mmHg for those in poor health. Many antihypertensive drugs are effective, though experts recommend angiotensin converting enzyme (ACE) inhibitors as first line therapy for hypertension in patients with diabetes because of their renal-protective effect. If ACE inhibitors or angiotensin receptor blockers (ARBs) or diuretics are prescribed, renal function and electrolytes

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(particularly potassium) should be checked within 1-2 weeks of starting therapy, 1-2 weeks after every dose increase, and at least yearly once dose and electrolytes are stable.

## Statin Therapy

The 2013 AHA/ACC guidelines recommend moderate-to-high-intensity statins for diabetics aged 40-75 years to protect against myocardial infarction and stroke. Those with limited life expectancy may not benefit from statins and the risk of side effects increases after age 75. Liver function tests should be measured before starting a statin and then as clinically indicated. If the low-density lipoprotein level is persistently <40 mg/dL, consider lowering the statin dose.

## Diabetic Education and Exercise

Glycemic control is improved, and rates of hypoglycemic episodes are reduced, when older adults participate in inter-professional diabetes education, like a chronic disease self-management program. Annual diabetes education is covered under Medicare Part B. Older adults who exercise at least 3 times/week can improve their glucose control and functional status.

## Aspirin

AGS guidelines recommend that older adults with diabetes and cardiovascular disease (CVD) be offered daily aspirin therapy at a dose between 81-325 mg per day, (maximum 325 mg) with higher doses for patients who have experienced acute cardiovascular events. Aspirin should be used with caution in adults over age 80 due to the risk of gastrointestinal and intracerebral bleeding. Routine use of aspirin for primary prevention of cardiovascular events in those without CVD is not recommended for older diabetics.

## Monitoring for Geriatric Syndromes

Older adults with diabetes have a higher risk of several common geriatric syndromes than do older adults without diabetes. Syndromes include falls, urinary incontinence, cognitive impairment, depression, and polypharmacy. They also have a higher rate of developing chronic pain from diabetic neuropathy. Table 2 outlines the intervals at which the AGS guidelines recommend screening for these syndromes along with recommended approaches to screening.

**Table 2. Screening for Geriatric Syndromes in Older Adults with Diabetes**

Syndrome	When to Screen	Recommended Screening Method
Falls	Initial evaluation and annually	History
Urinary Incontinence	Initial evaluation and annually	History
Cognitive Impairment	Initial evaluation and if there is an unexplained decline in status	Mini-Mental State Examination, Montreal Cognitive Assessment tool
Depression	Initial evaluation and if there is an unexplained decline in status	Geriatric Depression Scale or Patient Health Questionnaire (PHQ-9)
Polypharmacy	Annually and if patient experiences new onset of falls, urinary incontinence, cognitive impairment, or depression	Medication review
Chronic Pain	Initial evaluation and if there is an unexplained decline in status	History

## References and Resources

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The University of Arizona, PO Box 245069, Tucson, AZ 85724-5069 | (520) 626-5800 | <http://aging.medicine.arizona.edu>

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