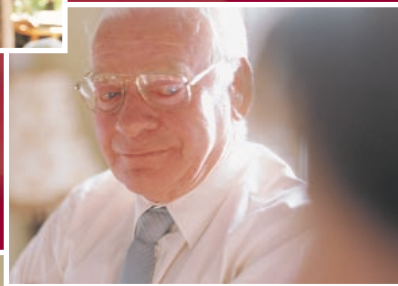


Guidelines

Management and Care of Diabetes in the Elderly



Established 1981

Introduction

Available diabetes guidelines rarely address specific care issues for the elderly, yet diabetes in older people is our most common chronic condition and one of our most challenging health problems. While therapeutic options such as physical activity, nutrition and medication are available and enable the achievement of optimal glycaemic control in the majority, co-morbidities, cognitive and functional disability, depression, frailty and social issues are common in the elderly person with diabetes and may impact adversely on efforts to optimise diabetes care. Where diabetes is under treated or under managed due to such barriers elderly people are more likely to experience increased morbidity, disability and mortality.

The **Guidelines for the Management and Care of Diabetes in the Elderly** focus specifically on the 'healthy' person with diabetes over the age of 65 years. This includes the elderly person who despite a decline in physical or cognitive function is able to actively participate in their diabetes care. The application of the **Guidelines** in the frail elderly person with diabetes should be determined on an individual basis with special consideration of the physical and mental health status of the person.

It is anticipated that the **Guidelines** will assist in decision making by providers and consumers, assure quality of care and offer the opportunity for significant health gain and improvement to quality of life in older people with diabetes.

The **Guidelines for the Management and Care of Diabetes in the Elderly** provide readily accessible information about diabetes prevention, diagnosis, treatment and long term management options for elderly people at risk of or living with diabetes today. They provide guidance about what is broadly appropriate rather than a prescriptive set of rules and it is important that their application relies on an individual medical assessment of the elderly person's health status, attitudes, self care beliefs and physical environment.

This information is a summary of the best knowledge and research available at the time of their development.

The **Guidelines for the Management and Care of Diabetes in the Elderly** were formulated using the NHMRC development process, the recognised standard for evidence based guideline development. Where there was a lack of evidence of sufficient research rigour to meet NHMRC standards, other types of evidence such as position statements and expert consensus were used to augment the available evidence.

Level of Evidence

- I Evidence obtained from a systematic review of all relevant population-based studies.
- II Evidence obtained from a well-designed population-based study or representative cohort study
- III Evidence obtained from less well-designed population study, non representative cohort study or well-designed case-control study.
- IV Evidence obtained from case series.

The search for evidence also identified issues requiring further research - these include the impact of the disease, the special problems faced by elderly people with diabetes in accessing a range of appropriate services and care, choice of treatment, treatment options and cost effectiveness and the consumer view. Importantly, identifying the gaps in our knowledge offers the opportunity to focus and motivate our research efforts in this special group of people.

detection & diagnosis

- Asymptomatic elderly people should be screened for undiagnosed diabetes by measurement of fasting plasma glucose as recommended for the general population.

assessments & targets

A) Elderly people with diabetes should have regular comprehensive clinical and laboratory evaluation of their metabolic control and screening for complications as follows:

Glycaemic control:

- Should be assessed by HbA_{1c} twice a year if glycaemic control is stable and quarterly in people with inadequate glycaemic control.
- The general target for HbA_{1c} is $\leq 7.0\%$ but may require upward adjustment to avoid hypoglycaemia.

Blood pressure:

- Should be assessed at least every 3 months in hypertensive people; every 6 months in normotensive people.
- The treatment target for blood pressure in elderly people is $<140/90$ mmHg.

Lipid profile:

- Should be assessed annually in people with normal lipid profile and every 3-6 months in those with an abnormal lipid profile or treated with lipid-lowering agents.
- The treatment targets should be LDL cholesterol <2.5 mmol/L and triglyceride <2.0 mmol/L.

Renal function:

- Microalbuminuria/proteinuria should be assessed annually in all people with diabetes and 3-6 monthly in people with microalbuminuria or proteinuria. Serum creatinine should be measured annually.

Eye examination:

- Initial examination should be performed at diagnosis. If no retinopathy is present, repeat every two years; if minimal non proliferative diabetic retinopathy (NPDR) is found, repeat yearly; at the stage of moderate NPDR or proliferative diabetic retinopathy, refer to an ophthalmologist as soon as possible.

Foot assessment:

- Feet should be assessed annually in people who have no history of foot complications and every 3-6 months in people with at risk feet, and appropriate management or referral if necessary.

Cognitive function assessment:

- The Mini Mental State Exam (MMSE) should be used to assess elderly people with diabetes as an adjunct to the planning of diabetes care and education.

B) These recommendations also apply to the frail elderly. However, the frequency of assessments and the targets may need to be adjusted according to the physical and mental health status of the individual.

special treatments

- Elderly people with diabetes should have initial and routine nutrition assessments as part of their diabetes management and be encouraged to follow the NHMRC Dietary Guidelines for Older Australians. In addition, attention to the intake and distribution of carbohydrate is important.
- Weight loss in elderly people is not recommended unless they are at least 20% overweight.

- Elderly people with diabetes should be encouraged to follow the National Physical Activity Guidelines for Australians which recommend 30 minutes of physical activity each day (aerobic exercise and/or strength training). Prescription of exercise in the frail elderly should be tailored to the individual.
- Alcohol intake in elderly people who are current drinkers is recommended not to exceed one standard drink in women or two standard drinks in men per day.
- Smoking cessation is recommended for all elderly people.
- The choice of hypoglycaemic agent for an elderly person with diabetes should take into account comorbidities, contraindications and potential side effects, especially hypoglycaemia.
- A range of antihypertensive agents can be used to control blood pressure in elderly people with diabetes.
- Lipid lowering therapy should be considered in elderly people, especially in those who have had a previous vascular event.

barriers to healthcare and education

- Special attention should be given to ensuring that elderly people with diabetes and their carers receive diabetes education and have access to general and specialist health services required for optimal diabetes care.
- Models and systems of care should be structured to ensure that elderly people with diabetes receive recognised standards of diabetes care and comprehensive assessments and appropriate intervention where necessary to assist care planning.
- Diabetes education for elderly people with diabetes should be individualised and should be specifically designed to address barriers which are common in the elderly - visual, hearing and cognitive impairment, depression, reduced mobility and manual dexterity, and social and financial problems.
- Professional training and continuing education programs in diabetes care should be recommended for health professionals caring for elderly people with diabetes.
- Government and community health and social services for the elderly should ensure that their staff have at least basic training in the special needs of elderly people with diabetes.

hypoglycaemia

- Reduced glucose counterregulation and awareness of hypoglycaemia with ageing, and overall health status, should be considered when making treatment plans. Increased blood glucose monitoring may be required to detect unrecognised hypoglycaemia in elderly people with diabetes.
- Elderly people with diabetes and their carers should receive specific individualised education about managing hypoglycaemia, with any change in medication, environment, cognitive or functional status.
- When prescribing sulphonylurea and/or insulin treatment in elderly people with diabetes caution should be taken (including a review of current medication) because of the increased risk of hypoglycaemia.

hyperglycaemia

- The possibility of hyperosmolar hyperglycaemic nonketotic state should be considered in elderly people with extremely high blood glucose levels.

primary prevention

- Elderly people should be encouraged to exercise regularly and to lose excess weight in order to reduce their risk of developing Type 2 diabetes.