

WHO NEEDS TO KNOW ABOUT DIABETES

by

Parshu Ram, Medical Unit, CWM Hospital, Suva

Diabetes mellitus is a common major metabolic disorder; its medical, social, psychological and economic implications are such that it constitutes a major public health problem. Often it is not perceived as such by the patients, the community, health care personnel and the policy planners. The aims of treatment are to make the diabetic's life as normal and as problem free as possible and secondly to prevent the occurrence of diabetes in the community by preventive approach. Diabetes education forms the basis of both these aims. Diabetes education should extend to all segments of the society, from the patient, his family, high risk individuals, health care personnel and policy planners, though with varying emphasis on different aspects of the disease.

WHAT DOES DIABETIC NEED TO KNOW

Diabetes is a chronic disease and the diabetic has to live with his disease. He must take the major responsibility of looking after his own health; he needs to adhere to diet and drugs, monitor the control and seek help when necessary; in other words diabetic is his own doctor. Help and support from medical profession is intermittent and at most no more than once or twice a month; consultations often held in overcrowded clinics and outpatients departments. For proper management the diabetic needs to know about the disease, should have ready access to diagnostic and treatment facilities and is motivated. Every diabetic needs education, which ideally should cover the following aspects:—

- What is diabetes
- What causes the disease
- How are symptoms produced
- Why is good control desirable
- How can good control be achieved
- How does insulin therapy work
- Complications of diabetes
- Need for lifelong therapy and observations
- Essential nature of dietary compliance
- Recognition of symptoms of poor control
- How to monitor control (urine, blood)
- Basic hygiene (feet)
- What to do if anything goes wrong
- How to deal with changes in life styles; both profession and private ie work, sports, pregnancy, travel, holidays, marriage and exercise.

THE FAMILY

Diabetic education of the family is equally important, more so when there is a diabetic child in the family. The family needs to have general understanding of the disease and its complications, an understanding of psychological problems (anger, guilt, fear, over-protection, rejection and inter personal relationships) and the practical management of the disease. The above should ensure proper attitude towards the patient and the disease, help in compliance and self-monitoring and in the recognition of emergencies (hypoglycaemia and ketoacidotic coma) and potentially dangerous situations (infection) and know what to do or where to go for advice.

HOW TO EDUCATE DIABETICS

Education of the diabetic should start early, slowly, is repeated and is continuous. The instructions should be simple, relevant and in patient's own language, taking into account his socioeconomic, emotional, and cultural background as well as his learning capacity. The methods could be simple written information, one to one discussion, group discussions or lectures, and where available video or computer assisted programmes and lectures. The burden of education must fall on the doctors, dietitians, nurses, primary health care workers and chiropodists. In some cases specially trained nurse or teacher educators, family members or even selected diabetic patients may be diabetic educators. The educational programme needs to be evaluated periodically to test patient's knowledge, attitude, behaviour and skills in diabetes control.

HEALTH CARE PERSONNEL

Education of these are vitally important as these are in direct, often continuous contact and most readily available of support personnel. Their education should include the practical needs of the patient and also public health and economic implications of the disease. They should receive adequate training in educational methods and practical experience in teaching and need to have good knowledge of diabetes and clear understanding of the practical management of diabetes and its associated socioeconomic and psychological problems. Their training should enable them to detect new cases, test urine for glucose, ascertain specific problems, give advice, prescribe follow up care and provide accurate information to the patient and his family. They

should also know when and where to seek advice themselves.

THE COMMUNITY AND HIGH RISK INDIVIDUALS

The community needs to be made aware of diabetes as a major public health problem with particular emphasis being placed on obesity and preventive measures. Better understanding of diabetes by the community will directly benefit the patient by improving his social acceptability and may affect health policy regarding provisions of health care services including additional needs of the elderly, the blind, the very young and the pregnant diabetics. More important is the awareness, appreciation and participation of the community, which ultimately leads to success of community-based control and prevention so vital in reducing the prevalence and incidence of diabetes.

THE POLICY PLANNERS

Diabetes both by itself and through its associated complications is a major and increasing public health problem. Also its chronic nature adds further dimension in planning control. The total

socioeconomic implications are great. Better understanding of the problem by the policy planners through diabetes education would motivate them to improve and extend the health services to include various aspects of diabetes and special requirements for certain diabetic sub-groups i.e. the blind, elderly, the very young and pregnant diabetes. Longterm benefits from investment in preventive health and health education needs emphasis because they are less well recognised than the shortterm benefits of curative medicine.

NEED FOR A CENTRE

The continuing health care of the diabetic depends on both the effective health care system and related research. Establishment of a special centre to promote and integrate care, learning and research in diabetes is essential. The centre should constitute the focal point on the national network of diabetes health care.

(This is a summary of the lecture given at CWM Hospital in November 1981. It is largely based on recent WHO/IDF Seminar on Clinical Epidemiology and Public Health Aspect of Diabetes, Cambridge, 1981).

DIET AND DIABETES MELLITUS

by

Parshu Ram, Medical Unit, CWM Hospital, Suva

The importance of diet in the treatment of diabetes has been recognised for several centuries and it still remains the mainstay of the management of diabetics today. Diet is also important in the aetiology of diabetes.

A. DIET IN AETIOLOGY OF DIABETES MELLITUS

i) **Insulin-dependent diabetes (IDDM)** Except for two pieces of evidence there is little data on diet in the aetiology of insulin-dependent diabetes. There is some evidence that prolonged malnutrition in childhood and early life may be related to "J" type diabetes. It is known that protein-calorie malnutrition has been associated with carbohydrate abnormalities and abnormalities in insulin secretion. In South India cassava consumption is associated with calcific pancreatic diabetes. Cassava contains cyanogenic glycosides

linamarin and lotaustralin; both undergo acid hydrolysis to hydrocyanic acid. The latter is detoxified by the enzyme rhodenase in the presence of sulphur-containing amino-acids and is excreted. Cassava contains very little protein (<0.5%) and of poor biological value. With malnutrition and lack of sulphur containing aminoacids, hydrocyanic acid tends to accumulate and is toxic to the pancreas. In rats ingestion of hydrocyanic acid does cause hyperglycaemia. However the evidence that cassava consumption is suggestive but not conclusive in the aetiology of IDDM, as in some areas where the cassava consumption is high this type of diabetes is rare. In Fiji there is no evidence that cassava consumption is aetiologically related to diabetes and in fact the situation is reversed.

ii) **Non-insulin-dependent diabetes (NIDDM)**
As regards non-insulin dependent