

A CLIENT-ORIENTED DIETARY ANALYSIS BY COMPUTER

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Dietitians often rely on dietary (24 hour) recall information from clients in analysing diets and making individual recommendations for change. It is considered by some inadequate to analyse an individual's diet on the basis of one day's food intake, Marr (1971). On the other hand, processing diet information by hand for a number of factors over several days is a time-consuming and awesome task. The process of making individual dietary recommendations is complex but they are usually made in a standardised way. The results of the individual assessment are often not given to the client but instead he or she is given recommendations, the rationale for which he/she does not understand. The consequence of this is a failure to understand the health risks associated with his/her dietary problems and frequently low compliance to the dietary regimen, West (1973).

At the Diabetes Education and Assessment Centre we have developed Dietade, a computer program which provides a detailed assessment of a client's four-day food intake, makes dietary recommendations and gives the rationale for these and provides both the professional and client with an evaluation of current compliance. This is achieved at a relatively low cost. Clients (diabetics and their families) are asked to keep a weighed record of food intake for four days. A variety of techniques are used to motivate and train individuals to keep accurate and honest records. Coded food records provide the input data for analysis by SPEADD, Zed et al. (1977), which analyses energy and 17 nutrients for each meal. This output is used by Dietade to perform various calculations, assessments and to make recommendations.

The Dietade program produces for each client a three-page print-out containing five sections: 1. weight diagnosis; 2. daily and average intake of energy, protein, fat, total, complex carbohydrate and sugar, and alcohol; 3. the balance of the diet (ie the per cent contribution of energy containing nutrients to average energy intake); 4. adequacy of selected vitamin and mineral intake; 5. carbohydrate spacing and variation within days and between days (this section appears only for diabetics). Each section includes an assessment of current intake, recommendations for change if necessary, and the health risks of each dietary problem. The individual print-outs are checked for anomalies and inaccuracies.

The print-outs are used in a small group education process to raise awareness and motivation and as a basis for client goal-setting.

Evaluation is in progress, but anecdotally, the Dietade output has considerable impact on both diabetics and their relatives in increasing diet awareness and in improving compliance.

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