

## **Issues Related to the Validity of Dietary Assessment and Electronic Food and Activity Records**

The use of food and activity records with diet assessment software has been found to be a valid, reliable method to input foods and evaluate food choice behavior as well as provide motivational messages for users (Kolasa, 1995). If used as recommended, dietary assessment software has been successful in the evaluation of dietary behavior and a powerful adjunct in nutritional behavior change interventions (Dennison, 1997). Strengths of the software are that its use does not rely on individual memory (food record can be completed immediately after meals for accuracy), it can provide detailed intake data, and can be used for multiple days (Lee and Nieman, 2003). The literature is replete with data that when energy intake is self-reported, food consumption is often underestimated, especially among women (Black, 2000). However, recent studies indicate that continuous reporting overtime lessens underreporting (Johnson, 2005) and individuals who are motivated to eat better, for any reason, tend to record their intake more accurately (Nasser, 2006). Individuals that use electronic diaries achieved compliance rates as high as 94% (Stone et al, 2003). Self-monitoring is an accurate method to obtain dietary data when used with electronic drag (foods from database) and drop to a graphic dinner plate (Baudisch et al, 2003) with electronic (fluid and wedge) estimators (Godwin et al, 2006). Offering food provisions to participants in weight loss interventions enhanced the completion of food records and attendance at group weight management sessions (Wing & Jeffrey, 2001). Microcomputer analysis of food records provides understandable graphic reports with virtually unlimited alternatives (Dennison, 1995). The success of dietary assessment software is markedly improved when used in theory-based interventions (Dennison, Golaszewski, 2002). Menus, personalized or samples, are frequently used to increase the accuracy of food records and generally serve as a guideline for patients (Miller et al, 2002; McManus et al, 2001). Limitations of nutrition analysis software are that it requires individual cooperation and may take more time than other methods to learn and record data. However, once dietary assessment software is learned it provides accurate and positive results.

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