

### *24-Hour Recall (24HR)*

The 24HR is a recall of all foods and beverages consumed by the participant in the preceding 24 hours. Methods for portion size estimation can include photos, models, or household units.

### ***Prospective methods:***

#### *Weighed food records (WFR)*

WFRs consist of measurements of all consumed foods and beverages on standardized scales, with data recorded either by pen-and-paper methods or by verbal description on dual-track tape. This approach collects highly accurate data but requires a high level of participant involvement.

#### *Diet Diary (DD)*

DDs are unweighed prospective records of dietary intake over a specified period of time. Data entry for this method is greater than for the FFQ or the 24HR, but this

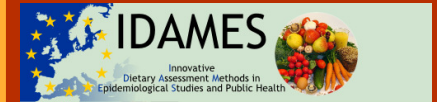
approach does not rely on individual's ability to recall previous dietary habits.

### **Innovative dietary assessment methods**

The majority of innovative methods are web-based, perhaps reflecting the appeal of this low-cost, automatic data entry approach. Digital cameras, mobile phone technology, and personal digital assistants have also been tested as potential means of enhancing dietary assessment.

Web-based questionnaires to estimate the dietary intake are easy to administer and offer several advantages, including immediate checks for incomplete or implausible answers, reminder messages to the respondent, automatic summarisation of answers, personalized feedback.

The web-based questionnaires require no expenses for printing, postage, manual check of incomplete answers, and transfer of data to an electronic format. However, their current applicability might be limited to specific target populations.



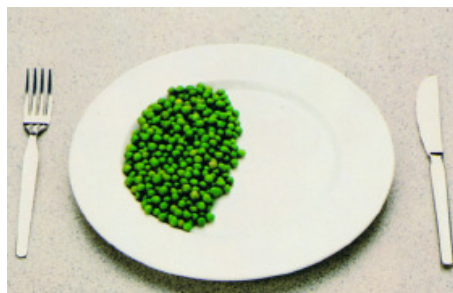
## **Dietary Assessment Methods: State of the Art Report**



The usual dietary intake of individuals is the relevant exposure measurement for investigating diet & disease relationships properly. However, it is impossible to measure usual dietary intake perfectly in large numbers of people. Therefore, it is important to develop dietary assessment methods and statistical techniques that minimize the measurement errors inherent in all self-reported dietary intakes. For large scale population studies, methods that are affordable and minimally demanding for participants are required.

As part of the large Innovative Dietary Assessment Methods in Epidemiological Studies and Public Health project (IDAMES), a review of the state of the art report of dietary assessment methods, both established and emerging, was prepared and can be accessed online at [www.idames.eu](http://www.idames.eu).

The state of the art report includes a review of validation studies of dietary assessment methods conducted in Europe, a detailed review of the 24 hour recall method, not limited to validation studies in Europe, and an overview of innovative methods for the assessment of diet, such as web-based methods, digital cameras, and personal digital assistants.



### **Commonly used methods for dietary data collection in nutritional studies:**

#### ***Retrospective methods:***

##### *Food Frequency Questionnaires (FFQ)*

An FFQ is a retrospective instrument designed to capture usual dietary intake, often over a specified period of time. An FFQ is considered (semi-)quantitative if the instrument addressed both the frequency and amount consumed for each food item.

Portion sizes can be estimated either based on household measures (cups, tablespoons), models, photographs or illustrations, or natural units (e.g. slice of cake).

The FFQ can be self-completed and can be scanned into computers to expedite data entry, but relies on memory and is limited to the list of foods that has been provided.