

## Food Intake

Obtaining accurate food intake information can be a challenge. It is not as easy as it may seem. Nutrition researchers have spent years studying ways to collect dietary information from people and have found that it is difficult to get accurate information. They have not discovered one method that works substantially better than all others. In general, researchers have found that people have a hard time remembering what they eat and in estimating portion sizes. In WIC we ask people to tell us what they ate during the previous day. Your first reaction might be, “What could be easier?” For many reasons people cannot or do not give accurate information when they are asked about their food intake.

Listed below are some of the reasons why it is difficult to get accurate diet information from people.



**Memory:** Many people do not remember what they ate yesterday. For some people it is because they do not have a good memory, but for most it is because they didn't “think” about what they ate and so were never really aware of what they ate. Have you ever been eating some chips or other snack food while watching television, suddenly the bowl is empty, and you find your self wondering what happened to all of the chips? People often eat when they are mentally preoccupied with other thoughts. As a result they are not conscious of what or how much they are eating. Can you remember exactly what you ate yesterday? The difficulty of remembering what is eaten is why people on diets are asked to keep a journal and to not eat while watching television, reading the newspaper or talking on the phone.



**Flat Slope Syndrome:** Several research studies have shown that people cannot accurately estimate portion sizes of foods. This is often true even after a person has received training and is able to use food models. To make the situation even more complicated, research has shown that overweight people tend to underestimate what they eat while underweight people tend to overestimate what they eat. This is called the flat slope syndrome. While people may be confident that they know how much food they eat, reality is that they often do not. In general, most people underestimate the amounts they have eaten.



Deference Behavior: Some people will report what they think they should have eaten instead of what they actually ate. This can occur for a variety of reasons. It can be because the person really thinks that they ate what they should have eaten. This is not uncommon. If a person ate spinach two days ago and it is the only vegetable they have eaten for two weeks, they may tell you that they regularly eat lots of vegetables. It isn't that they are lying. To them eating spinach once every two weeks is eating lots of vegetables on a regular basis. Deference can also occur because the person is embarrassed to admit what they ate or does not want to admit to themselves that they don't eat the way they think they should. Another variation on deference is when a person tells you what they think **you think** they **should** eat. They tell you they eat vegetables because they think that you will disapprove if they don't, or because they don't want you to think they are a bad parent.



Participant Motivation: A person must be motivated to give accurate diet information. Time and effort are required to remember everything you ate the previous day. Try remembering, in detail, everything you ate yesterday including portion size. It takes considerable time and effort. Some people may find it easier to just remember some of the foods that they ate the day before. Occasionally, a person does not want to be bothered with completing a food recall and will just write a few foods on the recall form so that you will quit asking.



Absence: When asking a parent what their child ate they may not know what the child ate because the child is at daycare 5 days a week or stays with a relative for significant portions of a day. This can be a problem when collecting dietary information. Ideally, the parent should instruct the caregiver to write down what the child ate for the day. If this did not occur then ask the parent to write down what the child ate on some previous day when they were with the child. If that doesn't work then ask them to write down what the child would "typically" eat in a 24-hour period.



Most people report their food intake in good faith and are not trying to give false information. It is just a skill that we as humans have not mastered. This makes it challenging for WIC staff to try to get accurate information. Here are a few tips that can help:



1. Be non-judgmental when collecting food intake information. If a person tells you they had pizza with sardines and prunes for breakfast - accept it. Don't grimace or make other faces. Don't look surprised. Don't say "Really?!!" Just accept what they ate without judgement. Otherwise a person will start to tell you what they think you want to hear.
2. Avoid giving praise for an adequate diet while collecting information. This positive feedback can also influence what the person tells you about their diet.
3. Use food models and utensils to try to establish portion sizes when needed. While research indicates that people have difficulty estimating portion sizes with food models, the accuracy is still better than when no food models are used.
4. Do not assume that you know how people eat or that most people eat the same way as you. Let the participant tell you what and how much they ate. For example don't assume someone puts milk on their dry cereal or that their salad is made primarily from lettuce.
5. Let the person finish telling you what they ate before you ask questions or before you give any nutrition education. The more questions you ask a person the more food they will report eating (even if they didn't eat more). Some participants may interpret questions as your way of saying what they should or should not have eaten. Also, if you give nutrition education before the person has finished they will be tempted to tell you what they ideally would have eaten.
6. Do not assume that people eat meals, eat at a table or only eat during the day. Ask a person to tell you about what they ate over 24 hours. Some people get up and eat during the night. Others don't eat meals and only snack. If you ask a person to report what they eat at meals they likely won't tell you what they had for snacks. Ask people to tell you everything they ate or drank during the 24-hour period. Many people assume beverages (especially alcoholic ones) are not part of their diet. Be sure to ask the person to list everything they ate and drank. Avoid using words such as "breakfast," "lunch," or "dinner."

## **24-Hour Food Record vs/Food Frequency**

Overall, it is best to let the WIC participant list everything they ate without input from WIC staff. The WIC staff person then should review the diet. A good question to ask the participant when they are done:

“Is this everything you ate or drank for the 24-hour period including snacks and beverages?”

Ask questions to clarify information that seems unrealistic or out-of-place after the participant has completed the diet form. For example, if a mom claims her two year old ate 3 cups of spaghetti for dinner it would be reasonable to verify that this is an accurate amount.

The Colorado WIC Program has two forms for collecting dietary information at certification/recertification visits, the 24-hour Food Recall and the Food Frequency. One of these two forms must be used at certification/recertification for all women and children applying for WIC. Diet information for infants is collected on the Infant Nutrition Questionnaire in a different format and is not covered in this module.

Local WIC agencies have the option of using either a 24-hour Food Recall or a Food Frequency to screen WIC participants for eligibility. Local agencies, however, need to use one form or the other for certification/recertification visits. Nutritionists and nurses, however, should always use 24-hour Food Recall forms for high risk counseling (when detailed diet information is needed).

There is currently no universally accepted “best” way to evaluate a person’s dietary intake. All methods for collecting dietary intake information have strengths and weaknesses that make them only approximations of how a person actually eats.

Before moving on to talk specifically about the 24-hour Food Recall and Food Frequency the next section will explain how diets are evaluated for nutritional adequacy.

## #1 Practice!



1. Write down every food that you ate yesterday (for the 24-hour period). Include the times you ate, the foods eaten, and serving sizes. Do you think you included all foods? Did you have trouble estimating serving sizes?
2. Use an unmarked cup and fill it with water. How many ounces of water do you think the cup holds? After guessing, use a measuring cup and measure the amount of water. Were you right? (It would be a very useful exercise to try measuring your foods at home for one day. Get your food for each meal and then estimate the serving sizes. After you have written down the serving sizes, measure the foods to determine your accuracy. Remember when using measuring utensils to level the food at the top of the measuring device).
3. List three reasons why a person may not give you accurate information about what they ate yesterday.

Answers to the Practice!  
are at the back of the module.