

ANALYSING YOUR CLIENT'S FOOD DIARY AND FLUID INTAKE

Methods to record and analyse dietary intake

Introduction

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Here is what you will learn in this unit:

- ❑ Why it's important to analyse your client's diet
- ❑ Methods to record dietary intake and their efficacy
- ❑ Food frequency questionnaire
- ❑ 24-hour recall
- ❑ Daily food diary
- ❑ How to analyse your client's food diary (step-by-step)
- ❑ The 5 questions you need to ask to evaluate your client's fluid intake
- ❑ What process you need to follow in your first and second consultations

Includes a the following downloadable client materials for immediate use:

- Food Frequency Questionnaire Template
- 24-hour Food Recall Diary
- Daily Food Diary
- Client Diet Analysis
- Client Action Plan

Analysing your client's dietary intake

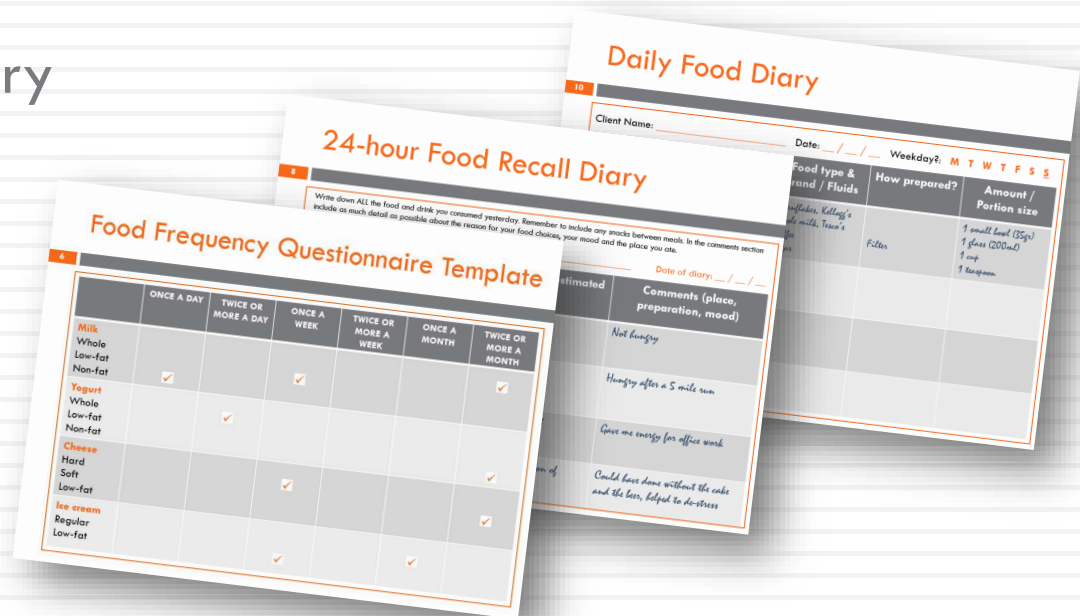
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- ❑ Most clients are only vaguely aware of what they eat!
- ❑ Without a diet record, you won't have sufficient detail about your client's habits, making it difficult to make recommendations and plan for the necessary adjustments that they need to make.
- ❑ There are various methods to record your client's dietary intake, such as:
 - Food frequency questionnaire
 - 24-hour recall
 - Daily food diary



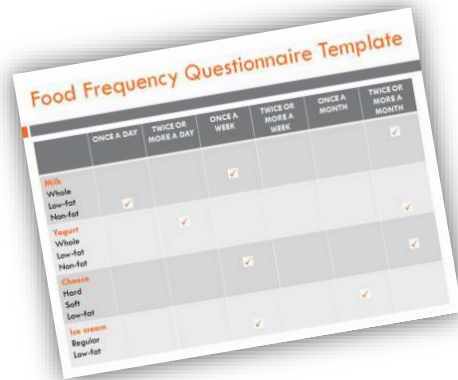
Dietary Records

- a. Food frequency questionnaire
- b. 24-hour recall
- c. Daily food diary



a. Food frequency questionnaire

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This is often used to get a general picture of someone's patterns of food intake.

- Your client would respond to a series of questions about the frequency of their food intake:
 - ✓ *How often do you eat red meat?*
 - ✓ *How often do you eat fruit?*
 - ✓ *How often do you drink milk?*
 - ✓ *Portion size, food preparation and supplement use are alternative questions*

This is a relatively easy and quick method, and it focuses on a particular food item or group.

- The downside is that it doesn't itemise the intake on a specific day, which is something that the Daily Food Diary does!

Food Frequency Questionnaire

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	ONCE A DAY	TWICE OR MORE A DAY	ONCE A WEEK	TWICE OR MORE A WEEK	ONCE A MONTH	TWICE OR MORE A MONTH
Milk						
Whole			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Low-fat	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
Non-fat	<input checked="" type="checkbox"/>					
Yogurt						
Whole		<input checked="" type="checkbox"/>				
Low-fat						
Non-fat						<input checked="" type="checkbox"/>
Cheese						
Hard			<input checked="" type="checkbox"/>			
Soft						
Low-fat						<input checked="" type="checkbox"/>
Ice cream						
Regular					<input checked="" type="checkbox"/>	
Low-fat			<input checked="" type="checkbox"/>			

b. 24-hour recall



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24-hour Food Recall Diary

Write down all the food and drink you consumed yesterday. Remember to include any snacks between meals. In the comments section write as much detail as possible about the reason for your food choices, your mood and the place you ate.

Client Name: _____ Date of diary: ____/____/____

Time / Meal	Food or fluid consumed (estimated portion size)	Comments (place, preparation, mood)
7am Breakfast	Wheat with half a cup Instant Coffee with stevia	Not hungry
9am Post workout	Small apple Handful of almonds 1 pot of Cottage cheese (200g)	Hungry after a 5 mile run
12pm Lunch	Large chicken salad, orange yogurt Small bottle of coke (330ml)	Give me energy for office work
7pm Dinner	Steak, steamed veggie, small portion of chocolate cake, pint of beer	Could have done without the cake and the beer, helped to do stress

- This is the most common technique of assessing food intake.
 - You would ask your client to describe the food, drinks and dietary supplements consumed during the previous 24 hours.
 - You may also obtain information about the time of food intake, preparation and eating environment.
-
- The advantage is that it is an easy technique, time-efficient and inexpensive.
 - Disadvantages include the likelihood of under-reporting, underestimating the energy and nutrient intake, and even the portion size.
 - For instance, underweight clients tend to overestimate portions, where overweight clients may underestimate them!
 - As one recall per week is unlikely to represent usual intake, **obtaining several 24-hour recalls within a week is a preferred method.**

24-hour Food Recall Diary

Write down ALL the food and drink you consumed yesterday. Remember to include any snacks between meals. In the comments column include as much detail as possible about the reason for your food choices, your mood and the place you ate.

Client Name: _____

Date of diary: ___ / ___ / ___

Time / Meal	Food or fluid consumed (estimated portion size)	Comments (place, preparation, mood)
7am Breakfast	Multivitamin and vitamin D Whole milk, half a cup Instant Coffee with stevia	Not hungry
10am Post workout	Small apple Handful of almonds 1 pot of Cottage cheese (200gr)	Hungry after a 5 mile run
13pm Lunch	Large salmon salad, crisps, yogurt Small bottle of coke (500ml)	Gave me energy for office work
7pm Dinner	Steak, steamed veggies, small portion of chocolate cake, pint of beer	Could have done without the cake and the beer, helped to de-stress

c. Daily food diary

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- A 7-day dietary survey is the most accurate and least misleading method, as it would also **include the food and fluid intake over weekends!**
- Extended recording times allows for a more reliable analysis of a client's normal diet and nutrient intake. It should also record any sports supplements consumed.
- **Analyse your client's diet:**
 1. Give your client a few copies of the **Daily Food Diary** (next page) and explain thoroughly how it should be completed.
 2. Fluids intake should also be depicted in the diary (water, caffeinated drinks, teas, sports drinks, soft drinks, fruit juices, smoothies, alcohol).
 3. Emphasise to your client that their food diary should be honest and detailed. The diary should represent their typical eating habits.
 4. During this assessment, your client shouldn't try to eat differently!
 5. Your client should not wait until the evening to complete the diary.
 6. After a 7-day period, collect the completed food diary from your client for analysis.
 7. Analyse the food diary using the processes described in this course and then make the appropriate recommendations to your client!

The image shows a sample 'Daily Food Diary' form. It has a header with the title 'Daily Food Diary' and a sub-header 'Client Name:'. Below this, there are fields for 'Date: / /' and 'Weekday: M T W T F S S'. The main body of the form is a table with the following columns: 'Time / Meal', 'Place', 'Food type & brand / Fluids', 'How prepared?', and 'Amount / Portion size'. The first row is filled with the following data: 'Sun Breakfast', 'Office', 'Scrambled Egg's, White milk, Caffe, Sugar', 'Fried', '1 small bowl (100g)', '1 glass (250ml)', '1 slice', and '1 teaspoon'. The rest of the table is empty.

Daily Food Diary

Client Name: _____ Date: ___ / ___ / ___ Weekday?: **M T W T F S S**

Time / Meal	Place	Food type & brand / Fluids	How prepared?	Amount / Portion size
9am Breakfast	Office	Cornflakes, Kellogg's Whole milk, Tesco's Coffee Sugar	Filter	1 small bowl (35gr) 1 glass (200ml) 1 cup 1 teaspoon

Practical Assignment



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Food Record Methods

What's your preferred method?

Why?

- **Print the 24-hour recall diary.** Write down ALL the food and drink you consumed *yesterday*. How accurate do you think your recall is on a scale of 1 to 10? _____
- **Print the Food Frequency Questionnaire Template.** In the left column, write 2 food groups you think you should be eating more of (such as cruciferous vegetables and oily fish) and 2 food types you think you should *limit* (such as crisps and sugary snacks). Now complete the frequency in which you currently eat all 4. After that, you should have a general overview of your total consumption. What changes do you think you should you make? _____
- **Print 7 copies of the Daily Food Diary.** In the next 7 days, completely each sheet as accurately as you can. By the end of the week, compare your **Daily Food Diary** with your **Food Frequency Questionnaire**. How accurate were your assumptions? _____

Client Diet Analysis

Diet evaluation, goal setting and recommendations

The image shows two overlapping forms. The top form is titled 'Client Diet Analysis' and contains a 'Name:' field, a 'Date: _/_/_' field, and a table with columns: 'Current foods', 'Healthier', 'Suggested', 'Ideal time', 'Likes/Dislikes/Haven't tried?', and 'Other ideas'. The bottom form is titled 'Client Action Plan' and contains a 'Name:' field, a 'Date: _/_/_' field, and a table with columns: 'Goal Type', 'Timeframe Dates', 'Objectives', and 'Notes'. The 'Goal Type' column has rows for 'Short Term', 'Medium Term', and 'Long Term'.

Current foods	Healthier	Suggested	Ideal time	Likes/Dislikes/Haven't tried?	Other ideas

Goal Type	Timeframe Dates	Objectives	Notes
Short Term			
Medium Term			
Long Term			

Diet analysis and goal setting

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STEP 1

In your first session with a new client, you wouldn't normally provide dietary advice. You could, however, provide generic guidelines based on the **Client Diet Assessment** questionnaire (Module 1).

First of all, ask your client to complete the paperwork covered in Module 9.

Then gauge your client's current weight and physical activity level to complete the **Daily Caloric Requirement Planner** (Module 1).

Finally, hand over sufficient copies of the **Daily Food Diary** and explain how these should be completed.

STEP 2

Schedule your follow-up consultation, ideally a week or so after your first session.

Ask your client to bring the completed food records to your follow-up consultation so you can analyse them.

If your client has a scanner or a high quality camera, they may want to email you their food records a day or 2 before the follow-up consultation, giving you more time to look at them and prepare.

Print copies of the client materials that you intend to use in this second consultation and make notes in advance.

STEP 3

In the first part of your follow-up consultation, analyse your client's diet and fluid intake.

Discuss with your client their current habits, food choices and complete the **Client Diet Analysis** worksheet.

Spend some time evaluating your client's fluid intake too.

Use the **Training Food Pyramid** for further guidance (more about that in the next unit).

The second part of your follow-up consultation should be used to formulate an action plan based on your client's goals. Use the **Client Action Plan** sheet for these purposes.



How to analyse a food diary

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- 🕒 **Step 1:** Calculate your client's rough daily caloric intake by looking at their food records, and compare this number to their DCN (Daily Caloric Needs) per the **Daily Caloric Requirement Planner**.
- 🕒 **Step 2:** Compare the balance of food groups (protein, carbohydrates and fats) and fluid intake using the **Training Food Pyramid** (next unit).
- 🕒 **Step 3:** Look at the food choices made within each group over the course of the week and identify healthier alternatives for foods consumed regularly. You can make suggestions concerning food type, preparation or cooking method.
- 🕒 **Step 4:** Make a list of healthier alternatives and discuss with your client whether they like, dislike or have not yet tried your suggestions.
- 🕒 **Step 5:** Once your client has agreed to some new ideas, these may be added to their healthy alternatives list! Use the **Client Diet Analysis** worksheet for that (next page).

Client Diet Analysis

Name: _____

Date: __ / __ / __

Current foods and drinks	Healthier alternatives	Suggested amounts	Ideal time of intake	Likes/Dislikes/Hasn't tried?	Other ideas



How to evaluate fluid intake

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- 🕒 **STEP 1:** Look at your client's fluid intake for the week.
- 🕒 **STEP 2:** Identify the drinks consumed such as water, teas, fruit juices, squash, caffeinated and alcoholic drinks.
- 🕒 **STEP 3:** Compare your client's intake with the guideline amounts for caffeine and alcohol below:

- *Is your client drinking enough caffeine-free and alcohol-free fluids to maintain a good hydration status?*

- *Do the fluids your client drinks contain calories in the form of sugar – e.g. soft drinks, fruit juices?*

- *Is your client drinking over the maximum recommended amount of caffeine? (Maximum is 300mg per day – i.e. roughly 6 cups of tea, 4 cups of instant coffee or cola, or 2 coffee-shop coffees)*

- *Is your client drinking alcohol above the guideline amounts? (Per UK guidelines, men and women should drink no more than 14 units of alcohol a week – i.e. 7 glasses of wine, or 6 pints of beer)*

- *How many calories are in the alcoholic drinks? (Roughly 70 calories per small glass of wine, 250+ calories per pint of beer, 50+ calories per shot of spirit)*

How much is 14 units of alcohol?

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These are visual representations of **14 units** of alcohol.

Remember:
14 units is an
intake **limit**,
not an intake
target!

Recommended alcohol limits for men and women

14 units of alcohol a week, which is:



6 pints of beer (4% strength) OR



7 glasses of wine (11.5% strength, 175ml) OR



14 single shots of spirits (40% strength)

The follow-up consultation



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- ✓ You should arrange a follow-up consultation to analyse the food diary and create an action plan. It would be wise to make notes in advance concerning issues that you wish to discuss with your client.
- ✓ The purpose of the follow-up consultation is to discuss the food diary, feedback your analysis and formulate an action plan based on your client's objectives.
- ✓ This could be combined with an exercise programme review.
- ✓ This action plan will essentially consist of a set of short-, medium- and long-term diet-related goals that link to the exercise and training programme and will help the client achieve their overall long-term goal, such as preparing for a competitive event. Use the Client Action Plan worksheet (next page) for this.
- ✓ You should make notes concerning your discussion with your client and write up the goals that constitute the action plan.
- ✓ A copy of this action plan should be given to your client along with any other information that may be useful to them.
- ✓ Once you have an action plan in place, you'll be able to design a nutritional programme based on your client's goals. Don't worry, we've got you covered! Throughout the course, you'll receive downloadable worksheets and planners to build your client's personalised nutritional programme.
- ✓ Additionally, in Module 9, we'll cover the health checks and paperwork that your client needs to complete before embarking on a nutritional plan with you.

Client Action Plan

Name: _____

Date: __ / __ / __

Goal Type	Timeframe and dates	Goals (specific and measurable)	Steps to take in order to achieve these goals
Short Term			
Medium Term			
Long Term			

Continued use of food records



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- After you have devised a nutritional plan for your client, it would be wise to monitor their intake based on your recommendations and to spot any deviations or habits that require some attention!
- For this, encourage your client to use the **Daily Food Diary** at the early stages of their new dietary programme as well as whenever you introduce new adjustments.
- Alternatively, you can complete the **Food Frequency Questionnaire** during any given session with your client to evaluate if they are following their plan or if further modifications need to be made.
- Another example would be to use the **24-hour Food Recall Diary** when your client is carb-loading for a competitive event (Module 4). This would allow you to see if your client is following the appropriate macronutrient ratios and to spot anything that requires an immediate change before competing!

Practical Assignment



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Evaluate your fluid intake!

Note: More about fluid intake, hydration strategies, electrolytes and sports drinks is covered in Modules 3 and 7

Look at your **Daily Food Diary** and examine your fluid intake for the week. Identify the drinks consumed, such as water, teas, fruit juices, caffeinated and alcoholic drinks. Compare your intake with the guideline amounts for caffeine and alcohol below:

- Are you drinking enough caffeine-free and alcohol-free fluids to maintain a good hydration status? _____

- Do the fluids you drink contain calories in the form of sugar – e.g. soft drinks, fruit juices? _____

- Are you drinking over the maximum recommended amount of caffeine? (Maximum is 300mg per day – i.e. roughly 6 cups of tea, 4 cups of instant coffee or coke, or 2 coffee shop coffees) _____

- Are you drinking alcohol above the guideline amounts? (Guideline amounts are 2-3 units per day for women, and 3-4 units per day for men) _____

- How many calories are in the alcoholic drinks? (Roughly 70 calories per small glass of wine, 250+ calories per pint of beer, 50+ calories per shot of spirit) _____

Additional Resources



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- [Int J Sport Nutr Exerc Metab.](#) 2003 Dec;13(4):521-38. Eating patterns and meal frequency of elite Australian athletes. PMID: 14967874
- [Int J Sport Nutr Exerc Metab.](#) 2011 Apr;21(2):105-12. Development and validation of a food-frequency questionnaire to assess short-term antioxidant intake in athletes. PMID: 21558572
- [Int J Sports Med.](#) 1989 May;10 Suppl 1:S3-10. Nationwide survey on nutritional habits in elite athletes. Part I. Energy, carbohydrate, protein, and fat intake. PMID: 2744927
- [J Int Soc Sports Nutr.](#) 2015 Apr 17;12:18. doi: 10.1186/s12970-015-0082-y. eCollection 2015. Nutritional knowledge and eating habits of professional rugby league players: does knowledge translate into practice?
- [Int J Sport Nutr Exerc Metab.](#) 2014 Sep 24. Relationship Between General Nutrition Knowledge and Dietary Quality in Elite Athletes.

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