Assessing Body Composition

This case study gets you thinking about how to deal with specific physiological questions.

In the Level 2 program, it's paired with lessons about knowledge production, assessment, and cognitive skills. In other words, how do we know what we know?

This particular case study requires some research. It includes links to some studies that are purposely information-dense. You'll need to put on your "active reading glasses" in order to make sense of them.

The point is to filter the information and extract the most important points for this particular case, rather than trying to know it all.

Tip: We suggest you divide your case study write-up into sections using subheadings. This will help you organize your thoughts as well as communicate effectively to readers.

The situation: Your new client Maria is a middle-aged woman who is interested in losing body fat to improve her health.

In particular, Maria is concerned about the relationship between body fat and health problems like heart disease.

She wants to know things like:

• What is the best method of measuring body fat?

• What is the relationship between body fat and heart disease?

Luckily, you've just come across a few relevant studies that might help answer her questions. Problem is, these studies are pretty technical and Maria's just a beginner with minimal nutrition and fitness knowledge.

Frankly, you're not 100% certain you can make sense of these studies either. But, armed with your trusty Level 1 Certification textbook (The Essentials of Sport and Exercise Nutrition) for reference, and your own assessment tools, you're willing to try.

Your assignment

Here's your assignment. Make sure you have read and understood all the instructions.

1. **Read the following four studies.**

   [Validation of Five Simple Models Estimating Body Fat in White Postmenopausal Women](#)

   [Prevalence of Obesity and the Relationship between the Body Mass Index and Body Fat](#)

   [The Relationship of Waist Circumference and BMI to Visceral, Subcutaneous, and Total Body Fat](#)

   [Body Composition and Body Fat Distribution in Relation to Later Risk of Acute Myocardial Infarction](#)

2. **Review the 7-site skinfold measurement assessment sheet in the Level 1 certification textbook,** *The Essentials of Sport and Exercise Nutrition*. **Here's a quick download of that assessment sheet.**

3. **Prepare case study notes. In your notes, answer the following questions:**

   a. Comprehend: What are the main points in each research study? What are the general findings? Summarize each study in your own words.

   b. Analyze: What are the pros, cons, and practical considerations of different bodyfat measurement methods, including your 7-site bodyfat measurement technique? What about BMI?

   c. Synthesize: When considered together, how do these research studies add to your understanding of bodyfat measurement methods?

   d. Evaluate: In an ideal world, where price and feasibility were no object, which bodyfat measurement method would you choose? Why?

   e. Apply: What are the key findings from these studies that you would share with your new client?

4. **In the final section of your assignment, write out a script for communicating these key findings to Maria, and making recommendations.**

   In the script, also demonstrate that you have listened actively to her needs and understood her concerns.

   Remember: She's a nutritional beginner, so you'll have to keep your language and concepts simple and straightforward — to answer her questions without overwhelming her.

   Here's a handy opener:

   "Hi Maria, I understand you have some questions about…"

   Now you take it from here.

PRECISION NUTRITION CERTIFICATION LEVEL 2
Case study worksheet

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