

Nutrition Software: 101 Questions to Ask Before you Buy

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NOT USING NUTRITION SOFTWARE? Then you're probably working too hard, charging too much for your services, and not getting enough business. Your work is likely to be less accurate and less thorough than it could be. And if that weren't bad enough, you're probably taking too long to service your clients. Modern nutrition software offers you greater accuracy (computers are good at arithmetic), a more comprehensive deliverable (software can quickly generate a wide array of pre-configured client reports), and the ability to get more work done (pointing and clicking is faster than "grinding it out" by hand). This translates into a more positive professional image, an elevation of your client's perception of your capabilities, more value for your client's consultation fee, and the ability to handle more clients than you previously could. Some of this software can even help you provide services on the Web.

One of the best ways to get more done in fewer hours is to have a software assistant who does most of your time-consuming "grunt" work for you. The ideal assistant would handle huge workloads and work quickly and without error and would do all this without asking you for a raise every three months. In fact, if that assistant would work for free (after a modest one-time finder's fee), you really could become more productive. The good news is that these assistants do exist. But you need to make sure you select the right one for your needs.

Since no software product will do everything for everyone, you're probably going to have to make some tradeoffs. You'll do a better job of selecting the right nutrition software package if you know what capabilities are available. You'll be ahead in time and money and – yes - you'll even sleep better at night if you take a few minutes to find out where the state of the art is now. If you don't get everything you want from a software package, you should at least know what you gave up. All the questions in this article allude to features and capabilities that exist now. That said, let's plunge into our 101 questions.

The Nutrient Database

The reliability of a software nutrition package cannot exceed the reliability of its data. What you intend to use the software for will dictate how rigorously the nutrient database's documentation must be. For instance, it's possible to obtain extremely detailed documentation for every nutrient value for every food item in the USDA nutrient database. If you don't need to know - for instance - the standard error of the mean for every nutrient value, you can afford to relax your standards – and broaden your software choices somewhat.

Does the software provide a Research Quality Nutrient Database? Look for software that provides you with a research quality data compiled from reputable sources. The USDA Nutrient Database for Standard Reference serves as the foundation for virtually all modern nutrition programs. If you have the need or desire to thoroughly document your information, select a product that provides not only the latest USDA nutrient data, but also the source information (whether the data was imputed, measured, calculated, etc.), sample count (number of samples upon which the laboratory analysis is based), and the standard error (standard error of the mean) for every nutrient value for every food item in the nutrient database.

How many nutrients and nutrient factors does the software track? Some packages only track basic nutrient information. The high-end products tend to track the basic nutrients, vitamins, minerals, amino acids, and fatty acids. Some track over 100 variables, including calculated

values such as % Calories from Fat. Ask to see a listing of which nutrients are tracked so you know before you purchase that you'll get all the information you need.

How many food items are featured in the database? The more food items you can find in your nutrient database, the more likely you are to find what you or your clients really eat. Also, the larger your database, the greater variety of food items you will find.

How many brand name foods are featured in the database? Unless your clients prepare everything "from scratch," what they really eat is brand name foods. And once again, more is better.

How many unique brand name foods and restaurant names are tracked? The more brand names the software tracks, the wider the diversity of the information you'll be able to access. (The "Lean Cuisine" brand name counts as a single unique brand name, although the database should contain dozens of food items that carry this brand name.)

How many restaurant menu items can you access? If your clients are typical, they eat out several times a week. If they're going to eat out, they might as well know what they're eating. And of course, the more restaurant data you can access, the better (i.e., "healthier") choices you'll be able to recommend.

Can you move frequently used foods into a separate, organized list for quick access? This is a time-saver. If you use a number of foods every day, you probably don't want to have to look them up every time you use them. Look for software that lets you organize these frequently eaten foods. A tabbed notebook with automatically alphabetized listings in each notebook tab is a practical model.

Do you have the ability to add an unlimited number of new food items to the program? With 800 new products hitting the supermarket shelves every month, no one is going to have an absolutely current database. You should be able to add your own food items by entering Nutrition Facts Label information yourself.

Can you enter a new food item or supplement by entering the Percent Daily Values (%DV)? The ability to enter actual values of % Daily Values saves you a lot of time when package labels include %DV's but fail to include actual values.

Does the software provide nutrient data for enteral and parenteral products? If it is important to you, you should find out which company's products are covered and how many product entries the software provides. Information on the major products used in modern therapy is handy - especially if it's organized for you by purpose (gastro-intestinal, hepatic, pulmonary, renal, etc.).

Does each food item in the research quality nutrient database provide Nutrient Databank and IFDA numbers? The NDB numbers are those numbers assigned by the Nutrient Data Laboratory of the USDA in the Standard Releases. They serve as a positive identifier for the food item. The IFDA numbers assigns the International Food Distributors Association.

Database Features and Capabilities

Different software packages shine in different areas. If you want the ability to view your nutrient data, shrink it, magnify it, split it, sort it, pull out specific brand names or food names, and perform simple or complex queries on the nutrient data, "Yes" answers to the following questions will make these analytical chores not only possible, but even enjoyable.

Does the software let you view the nutrient information for more than one food item at a time? Looking at your nutrient data for one food item at a time is like looking at a huge nutrient database through a very tiny pinhole. For instance, if you're looking for frozen yogurt, you can

see the values for any single frozen yogurt entry, but you can't see and compare this nutrient data for say, thirty yogurt entries at once. A tabular presentation with columns and rows of nutrient data lets you peruse many entries at once so you can select the best-qualified food item for your application.

Will the software let you view the nutrient data in a tabular "spreadsheet" format? When you view the nutrient data formatted in columns and rows (like you do in nutrition information book or a spreadsheet program), you can view and compare a large number of similar entries at once. For instance, if you are looking at a list of frozen yogurts in a tabular format, you can easily scan the Saturated Fat column to see which particular yogurt offers the lowest saturated fat content. This information could easily influence your recommendation to a client.

Can you view all the nutrients for any food item in a "single screen view" easily and whenever you wish? Once you've singled out a food item for further study, a simple method (such as double clicking on the item or clicking a button while that item is highlighted) should generate a single-screen summary for that food item. This type of view shows you all the nutrient data for the selected item in a single scrolling screen. This lets you study all the data for a selected food item in a concise format.

Can you view the nutrient data in a "split-screen" view? When you enter this mode, a vertical "splitter bar" appears on the screen. Each side of this splitter bar contains data for the displayed food items. Each side offers independent horizontal scroll bars that allow you to view nutrient data from two very different areas of the data. You could, for instance, look at data for Calories and Protein on one side of the screen and Vitamin E on the other side. This feature is very familiar to users of Microsoft Excel.

Does the software let you select which nutrients it will display to the screen? Having a hundred columns of nutrient data can get in your way if you're only monitoring say, three of those nutrients. If you could just select the three nutrients and have the software display those columns of information to the screen, you could spend your time looking at the nutrients in which you are currently interested. The software should, however, record all the available nutrient information for you whenever you record an intake, recipe, meal or meal plan.

Can you resequence columns to place desired nutrient information next to each other? Suppose you wanted to position the Potassium and Sodium values next to each other. You should be able to place the Potassium column next to the Sodium column if you wish. (Dragging-and-dropping the column header is a convenient way to do this.) Rearranging columns lets you view the data any way you want to view the data - instead of how the software says you have to view it.

Can you resize column widths? The ability to resize column widths lets you optimize the number of columns of nutrient data you can display per screen. (Dragging the right edge of the column header is the standard way of doing this.) Narrowing the columns let's you view more data on-screen at once. And if the software remembers these settings for you, you won't have to reset them every time you view the same or similar information.

Can you "zoom" in and out of the live nutrient data? This consists of increasing or decreasing font sizes to see more data (or to see less data better). This ability lets you view a lot more data on the screen at one time without having to switch your screen resolution via your operating system.

View, Rank, and Query Capabilities

Today, it's possible for you to answer almost any question you can ask about the nutrient data. A powerful database retrieval and display mechanism makes using nutrient data more useful by

letting you isolate foods that are high in (or low in) any specified nutrient. You can isolate and view foods of a given brand name (or names). You can isolate a specified set of brand names and sort them high-to-low (or low-to-high) based on their values for any nutrient. You can specify criteria for every nutrient that the software tracks and have the database engine return to you all the food items that meet all your specified criteria.

Can you display categories of foods (i.e., "cereals, ready-to-eat" or "diabetes/glucose intolerance") and view them and their associated nutrients alphabetically, by food names in a tabular, spreadsheet presentation? This is a useful feature. Suppose you are looking for a suitable enteral product for a renal patient. It would be nice if you could select a food a category called "Renal Support" (or something similar) and view an alphabetical listing of all the renal support products and their nutrient information.

Can you rank (sort) foods on its value for any nutrient? This capability lets you sort all foods from high-to-low or low-to-high based on their values for any nutrient you specify. This gives you the ability to locate the foods that are high in a nutrient you are looking for or low in a nutrient you are trying to avoid.

Can you rank (sort) foods by their values for % Calories from Protein, % Calories from Carbohydrates, or % Calories from Fat? This helps you compare food items in an "apples to apples" manner. If you rank foods on their actual fat content, a large portion of one food may misleadingly come up ahead of a small portion of another food item that is high in fat (like a pat of butter).

Can you display all food items with a specific brand name (or set of brand names)? All nutrition programs let you search by food name. But there are times when you may want to view all the offerings from one brand, say, Lean Cuisine or a set of brand names, say Lean Cuisine, Weight Watchers, and Healthy Choice. The ability to display all the foods of a brand name (or names) in alphabetical order by food name lets you scrutinize their nutrient data in a convenient and revealing format.

Can the software sort and display all foods above or below any value specified for any nutrient? This means you could, for instance, display all the breakfast cereals that have at least 2.5 grams of Total Dietary Fiber, ranked from high-to-low. Or all the hamburgers with less than 6 grams of Saturated Fat, ranked from low-to-high.

Can you perform a query on the nutrient data? A query is a Boolean AND search. It lets you display all the foods in a product category that meet all the criteria you wish to specify. For instance, you could locate all hamburgers and cheeseburgers from Wendy's, Burger King, and another half dozen restaurants that contain, say, no more than 753 mg of Sodium, at least 10.5 gms of Protein, and then rank (sort) these items from low-to-high based on their % Calories from Fat. A sophisticated query function lets you answer virtually any question you can ask about the nutrient data. The most powerful query functions allow you to specify upper or lower limits for every nutrient in the database if you wish.

Intake Management

An "intake" is a listing of food items that a client eats during the course of some time period. Nutrition software generally provides daily totals and average daily totals for client intakes. Some software packages let you analyze nutrient totals (and averages) for individual meals and/or snacks. Although all high-end nutrient analysis programs can analyze intakes, not all nutrition software is equally capable in this regard. Nutrition programs also refer to nutrient intakes as "diets" or "foodlists."

Can you subtract ingredients from an intake? For instance, if your client told you they ate a Whopper minus the pickles and mayonnaise, your software should be able to account for this quickly and conveniently.

Does the software let you assign an intake item (a food item) to a particular meal or snack while you are adjusting its serving size? This saves you time and lets you later view the intake not only in terms of entire days, but by meal or snack as well.

View analyses of an intake day's individual meals or snacks (both numerically and graphically) by simply selecting the meal or snack of interest? This could be implemented, say, with a tabbed notebook. Click on one tab to see the analysis for the entire day. Click on additional meal or snack tabs to see the analysis for a single meal or snack.

Ability to create a list of foods, beverages, and/or supplements that will be automatically recorded to a client's intake each time you open a new day's intake for that client? This feature makes it easier to record intakes for people who often eat the same things every day (or in some cases, are required to eat certain foods or supplements every day). It's also handy for recording that daily supplement.

Does the software allow you to select and copy food items in your intake into a shopping list that you can edit? Look for the ability to pick and choose the items you want to add to the shopping list – after all, you may already have many of the food items on hand.

Can you program "alarms" to trigger when clients exceed any nutrient limit(s) you set for them? This ability lets you warn yourself when you attempt to select a food item that, for example, may be too fatty, too salty, or too high in cholesterol for a particular client.

Can you "compose" your intakes? The ability to perform a compositional analysis across all the items in an intake lets you see where all that Fat (or Saturated Fat, or Sodium, or any other nutrient) in that intake comes from. It should not only rank (sort) the ingredients from high-to-low (or low-to-high if you wish) based on the content of the selected nutrient, it should also tell you what percentage of the intake for that nutrient comes from each food item. You can also compose an intake to determine which foods in a client's intake provide the most Fiber, Protein, Calcium, or anything else. The ability to compose intakes lets you quickly spot strengths and weaknesses in an intake.

Can you adjust the serving size of the food item as you record the intake? This ability saves you time by letting you handle the food item just once rather than having to edit your list of foods for serving sizes later. (However, you should have the ability to adjust them any time you wish.)

Will the software let you copy a day of a client's intake (or selected meals and/or snacks from that day's intake) to another day (or days) that of that same client's intake? Versatility in copying work already performed can save you a great deal of time, effort, and frustration. When using this capability, you're probably copying information from a previous day to the present day. This is often the case in clients who tend to eat a lot of the same things every day. It won't take long for you to discover that it's far easier to copy and then edit for deviations than to re-key all that redundant information day after day.

Will the software let you copy a day of a client's intake (or selected meals and/or snacks from that day's intake) to a different client (or clients) intake on any day (or days) that you specify? In this case, you may be working with a family or members of a group that eat together (like residents of a long term care facility). Since everyone is eating basically the same things, you'll probably find it easier to copy the intake to the other clients, then edit just the deviations.

When adjusting serving sizes, will the software let you select the units (cups, oz., grams, tbsp., etc) and the serving amount in decimal or fractional format? When you enter values like "1.67", "2 2/3," and "3-3/4," the software should automatically parse out the numbers and do the math for you. This way, you keep your focus on what you are doing rather than worrying about fractions, decimals, division, or addition.

Can you copy a day of a client's intake into a day of a meal plan? This saves you the time and effort of having to re-key a client's "perfect day" into a meal plan.

Does the software show your client's intake in terms of "PCF Ratio?" That is, does the software provide a running tally indicating not only the total absolute quantities of all the nutrients, but also the percentage of total calories from Protein, Carbohydrates, and Fat?

Are you able to display the intake as a percentage of the client's RDA (or any other customized client goal)? After all, you're tracking nutrients with certain nutrient goals in mind... viewing intake as a percentage of these goals makes it easier to keep score.

Can you set PCF Ratio Goals? Your software should be able to set up and track any "PCF Ratio" (percentage of calories from Protein, Carbohydrates, and Fat) you want your client to achieve. For instance, you should be able to tell the program you want 15% of daily intake calories to come from Protein, 55% of calories from Carbohydrates, and 30% of calories from Fat. It is also helpful if the actual PCF ratio and the target PCF ratio goal are prominently displayed on each intake.

Recipe Management

A "recipe" is a collection of ingredients (or even other recipes). Although "cookbook" software products are available for creating, organizing, and using recipes, most of them don't come anywhere near competing with professional nutrition software packages when it comes to in-depth nutrient analysis of those recipes. Recipes are also referred to "menus" or "foodlists," depending on the nutrition software you are using.

Can you "compose" your recipes? Performing a compositional analysis on a recipe tells you where all that Fat (or Saturated Fat, Sodium, Cholesterol, or any other nutrient) in that recipe comes from. It should not only rank (sort) the ingredients from high-to-low or low-to-high based on the content of the selected nutrient, it should also tell you what percentage of the entire recipe is contained in each ingredient. You can also compose a recipe to determine which foods in a client's recipe provide the most Fiber, Protein, Calcium, or anything else.

Can you subtract ingredients from a recipe? You should be able to subtract, say, a tablespoon of mayonnaise from that Whopper sandwich if you wish. Then, you should be able to save that recipe as "Whopper w/o Mayo" for use in subsequent intakes, meals, and meal plans.

Can you record recipes-within-recipes? This lets you create, say, a low Fat, low Sodium soup stock that you can use in your other soup recipes.

Does the software give you the ability to export the recipe to a compact (compressed) file that can be imported into any other version of the nutrition software package? This allows you to conveniently share recipes with your colleagues via email, Internet download or on diskette.

Can you stamp recipes with a byline before distributing them? If you're going to distribute your work, you should be able to take credit for it. A byline can contain information regarding authorship, credentials, copyright, company, web address, phone, etc.

Can you view "on-the-fly" tallies for all nutrients as they are added to a recipe? This feature lets you see how many Calories, how many Fat grams, how much Sodium, etc. you are recording

or adding to a recipe. As you adjust serving sizes, these numbers should instantly update themselves for you.

Does the software let you organize your recipes in a convenient manner? A tabbed notebook is a popular way to organize your recipes. Automatic alphabetizing of the recipes within tabs is also a nice touch.

Can you drag-and-drop recipes from tab to tab? This may be the easiest way to organize your recipes.

Can you change the number of servings within a recipe? If you create a recipe that serves more than one serving, you should be able to tell the software how many servings there are. From then on, the software should report the nutrient analysis for the entire recipe and for a single serving. (The single serving amount should always be used when you record a recipe into an intake or meal plan.)

Does the product support recipe scaling? "Recipe scaling" is the ability to change the quantities of a recipe to serve more (or fewer) people. If you create a recipe that serves six, but need to scale it to serve 1,234, you should be able to simply tell the software to alter the amounts of each ingredient to make that many servings. The software will increase the amounts required for each ingredient to create all the required servings.

Meals and Meal Planning

A "meal" is a collection of food items (i.e., "12 oz. skim milk") and recipes (i.e., "Ham and Cheese Sandwich") that is used to represent a meal or snack. The ability to create meals is the first step toward organizing these meals into "meal plans." Meals and snacks can be used as the fundamental building blocks for "meal plans." "Meal plans" are collections of meals and snacks organized on a day-by-day basis for some period of time (say, four weeks). Various nutrition products refer to meal plans as a "menu," a "menu plan," or a "cycle menu."

Can you create meals at a variety of calorie levels and a variety of PCF (Protein, Carbohydrate, and Fat) Ratios suitable for use as building blocks for full-fledged meal plans? Having a wide variety of pre-made meals is useful – you can mix and match them to create a wide variety of meal plans that address a wide variety of special needs.

Can you create meal plans for diabetic, heart, renal, and pulmonary patients or for weight-loss, weight-gain, weight-maintenance, and bodybuilding, or for nursing homes, school lunch programs, and cafeterias? A versatile meal planner allows you to tailor your meal plans for any special need.

Can you create a meal plan report that shows what is to be eaten for three meals and three snacks a day for a month (organized by meals and snacks), with a sequential date attached to each day, in a "checklist format" for each food item so that your client can check the foods off as they eat them? These capabilities make it convenient for you to make dietary recommendations that are clear, concise, and trackable.

Can you edit an existing meal plan to create a new meal plan? This capability makes it easier to create new meal plans based on the work you (or others) have done on other meal plans. For example, if you have an "1800-Calorie Vegetarian Meal Plan," you could edit it to produce a "Low-Sodium 1800-Calorie Vegetarian Meal Plan" without having to start from scratch.

Can you record any meal plan as any client's intake? You shouldn't have to re-keystroke weeks of intake information to record an intake for a client. If you've created a meal plan for a client, you should simply select a meal plan, select a client, and then select the starting date. The

software should do the rest for you. This capability makes meal plans worth the effort to produce.

Can you export a custom meal plan as a compact (compressed) file that can be shared with other users via email, the Internet, or diskette? This makes it very easy to share meal plans your colleagues.

Client Management

Although a number of features fall under this category, the most basic client management capability is to "log on a client" – that is, to record the personal information required for the software to make the calculations required to estimate calorie requirements, nutrient goals, and to make other related recommendations.

Does the program help you set reasonable dietary and exercise goals for your clients? The program should ask enough questions to help you determine how many calories you or your clients need to achieve specific weight and nutrition goals, whether the goals are to gain, lose, or maintain body weight.

Does the program let you select and/or edit the formulas used to determine calorie needs? This lets you adjust the caloric determination based on your criteria rather than someone else's. Look for software that also allows you to override the calculation if you wish. (If a client is under her physician's order to maintain a 1200 calorie a day intake, you should be able to make it so.)

Does the software contain a contact manager to track client's names, addresses, email addresses, phone numbers, etc? This functionality makes it easier to generate mailing lists for periodic newsletters or for announcing "monthly specials."

Will the software let you calculate client goals based on their body weight or based on their body fat content, as you prefer? Look for software that gives you both options. The former method is the most common method, the latter method is normally a more accurate method. As a professional, you should be able to choose how you want to work either way.

Does the software track client information (medical conditions, allergies, doctor, etc.), measurements (blood pressure, biceps, resting heart rate, etc.), body chemistry (cholesterol, triglycerides, uric acid, etc.), body weight and body fat content, and give you the ability to add virtually anything else you wish to track? A full-featured information tracking capability makes it easier to obtain and track important information about your clients and to provide reports for them as needed.

Do you have the ability to track and graph your client's body weight and/or body fat over time? As incredible as it might seem, not all software packages – not even some "high-end" products – can do this!

How many clients can the software track? Most products claim to track an unlimited number of clients, but most cannot. Most products have an actual limit that depends on a range of factors having to do with limitations set by the operating system (i.e., Windows 98). The operating system allocates a certain amount of system resources for handling list box entries. This sets the actual number of entries that it can load at once to roughly 1500 to 2500 listings (the shorter the client names, the longer the list). If you are logging on a hundred clients a day from a Web site and using the nutrition software to automatically log these clients in, you may find that your "unlimited client handling" capability has peaked out. Ask the software maker if they are using a "virtual list box" to handle their client list. A virtual list box is special code that tells the program to store in memory only the clients you can see listed in the list box... this allows the operating system to only have to handle a few list items at any one time.

Nutrient Analysis Capabilities

Software nutrition managers are often referred to as "nutrition analysis programs" – underlining the importance of analysis in nutrition software. Analysis capabilities vary from product to product. Some packages offer a number of fixed reports that you can simply click on to select and print. At the other end of the spectrum, you can select the ability to specify virtually any parameter that you may wish to include in your analysis. These highly customized analyses require far more direction from you, but they reward you with a far more customized output.

Can you perform deep nutrient analysis of a client's intake by specifying all the parameters and having the software generate a custom report for you? Parameters would include specifying the days to analyze, selecting the meals and/or snacks to analyze, specifying which factors to analyze (the client's total daily intake, client's average daily intake, etc.), specifying which meals and/or snacks to analyze, selecting whether to analyze every food item individually, specifying which nutrients you want to include in the analysis, then specifying which sections of personal information to include in the report. This type of control over nutrient analysis is what puts the "high" in "high-end."

Can you save the results of your analyses in spreadsheet and/or database format as well as in a word processor format? The spreadsheet format makes it easier to share research data with colleagues around the world. (You can read a word processor report, but you can use a spreadsheet report.)

Can you perform group analysis of clients by selecting a group of dozens - or even thousands - of clients and analyze their intakes both as a group and as individual clients, then save your results in word processor format or in a format suitable for use with external spreadsheets or databases? This capability helps facilitate scientific research, clinical studies, and educational scenarios by tracking the nutrient intakes for large groups of clients. The spreadsheet format makes it easy to share the results with others.

Exercise Management

Exercise is an important facet of good health. Indeed, some nutrition professionals even refer to exercise as the "magic bullet." No full-featured nutrition manager should ignore or undersupport this crucial area.

Does the software include an exercise management capability that will calculate caloric expenditures for an unlimited number of exercises? You should be able to add your own activities and exercises to the software's database.

Does the software generate "client-specific" exercise expenditure calculations that take in the activity, the client's body weight, the intensity of the exercise, and the activity duration when calculating the total calorie expenditure? Some packages don't consider intensity or the client's body weight... meaning, for example, that their calorie expenditure calculations for an 84 lb. girl performing low impact aerobics will be the same number of calories as for a 257 lb. man performing the same exercise.

Will the package print out a custom client-specific report that shows how many calories your client will expend in performing a wide variety of common exercises for 30 minutes? If you tell your client you want her to burn 400 calories in exercise every day, Monday through Friday, she may be eager to get started. The next thing she'll want to know is what her exercise options are. A client-specific exercise report will provide her many options. Such a report offers the client a wide variety of activities to choose from to achieve your recommended exercise calorie expenditure goal.

Does the software prepare an "Exercise Prescription?" Some clients don't want a list of exercise options... they don't want a chart showing them how many calories they will burn in performing a variety of activities... they want an exercise regimen specifically tailored to their needs. So give your clients what they want.

Will the software help you track daily calorie expenditure goals from activities and exercises? You'll want to be able to track the exercise history to make sure he or she stays on track.

Does the software calculate and support target heart rate training? Many clients today take their exercise routines seriously. Monitoring their training heart rates is probably the most practical scientific approach to fitness training. Heart rate is considered the best single indicator of intensity, and most heart rate monitors will measure "time in zone" (the number of minutes the client's heart rate is in the training range). If this is important for you, look for software that will estimate the target heart rate zone for clients, generate a training zone exercise prescription, and track the workouts over time.

Will the software track resting heart rate? Often, the very easily measured goal of heart rate training is a lower resting heart rate. If you're going to prescribe heart rate training, make sure the software will track the client's resting heart rate.

Reports

The part of a nutrition package that the users sees is the report. Look for variety, flexibility, and customization capabilities.

Can you produce a highly customizable macro-based assessment report for your clients? A macro-driven report is nearly infinitely customizable. You can edit a "template file" that looks just like your final report will look except for one difference: you insert placeholders ("macros") where your client's information goes. You can format the template file as much as you wish (align text, underline, italicize, or bold face text; insert tables, change font faces and point sizes, etc.). This macro-driven assessment report capability makes it possible for you to produce customized assessment reports for every client you see. Although it looks to your client that you gave up your evening to produce the report... in actuality, it takes only about 10 seconds.

Does the software include an integrated word processor that allows you to edit and spell-check the reports and save them in a variety of formats? This feature allows you to customize your reports to a high degree. It also lets you use the word processor stand-alone to generate other documents.

Can the software automatically insert a text or graphical "header" into the top of your reports? This lets you create a page banner containing your logo, your name, company name, phone, email, address, etc., and place it at the top of every report you produce.

Can you produce a wide variety of useful reports for your clients? The easier and faster it is to produce commonly required reports, the more real value you can deliver to your customer. After all, the report is often all the client ever sees. What's even better - if you have the time, skill, and patience - is a package that lets you design new custom reports whenever you have the need.

Can you save reports, analyses, and documents in Rich Text Format (RTF) format? You should be able to save any report, analysis, or document you produce in Rich Text Format so that you can use the word processor (like MS Word or WordPerfect) that you are most familiar with to edit your documents.

Does the software flag nutrient totals with missing values? This is important information. All software packages contain "missing values." A missing value occurs when no value is given for a particular nutrient in a particular food item. When intakes, recipes, meal, and/or meal plans contain missing values, there is a risk of underreporting these nutrients. (For most of us, this is a better problem to have than overreporting.) The software should offer to flag all occurrences of this for you.

Synchronizing your Work Across Two or More PC's

If you work in more than one location, it may be crucial for you to be able to "clone" the client, intake, recipe, and meal plan information on two or more computers. If you travel and you need to carry your information on your notebook PC, you need the ability to synchronize computers with your nutrient software's data. If this is an important requirement for your work, it will pay to ask before you buy.

Can you back up all the information (regarding clients, recipes, meals, meal plans, etc.) in your nutrition manager and restore it to another PC (say, your notebook PC) that is also running the nutrition software? This keeps both PC's running exactly the same information. And that makes it convenient for you to take your work out of the office for doing off-site assessments or for creating recipes or meal plans at home. Unfortunately, most high-end nutrition software packages don't support this valuable feature.

Data Exportation

There may be a time when you need to get the data out of the software and into a spreadsheet or database. Some packages won't do this. Others don't do this conveniently. If you have this need, make sure to inquire before you buy.

Can you export the nutrient data from the software into a format suitable for use in stand-alone spreadsheets or databases? Some packages let you export only one food item at a time, while others won't let you export the data at all. Some have databases in dBASE format that you can read with a database program. And some let you export everything by selecting the food items to export as well as the specific nutrients to export. This makes it easy to narrow your research to the few foods that are important to you. Some high-end products will let you export selected data from the nutrient information screen.

Miscellaneous Features

Often, the things that separate one product from others is not how it handles basic features, but what it does beyond the basics. These miscellaneous features may be major or minor, depending on the importance you place on them.

Does the software provide nutrient information in the form of "food exchanges?" This information can help your clients track their intake without having to perform tedious math to count up their intakes. It also helps you check for "balance."

Does the software include a module for creating publication quality Nutrition Facts Labels? If so, make sure you find out if it is included as part of the initial cost or if there's an extra cost for this capability. (This particular capability is standard with some packages, but can be a \$300 option in some products.)

Can you set user-definable alarms? User-defined alarms let you program client-specific alarms that trigger when you try to select any food item that exceeds the maximum set-point (that you had set) for any nutrient. (Fat, Saturated Fat, % Calories from Fat, Sodium and Cholesterol are popular alarm targets.)

Does the software provide a capable 2-D/3-D graphing module? This would include 2-D and 3-D charts and graphs and support for area, bar, line, pie, point, scatter, and spline charts. Change colors. Rotate these objects in space, edit headings, titles, and values. Format heading, titles, and values. Control shading, coloring, scales, depth, etc.

Does the software tell you the PCF (Protein-Carbohydrate-Fat) Ratio for every recipe, intake and meal plan? It's arguable that the calorie level and the PCF ratio (the percentage of total calories from Protein, Carbohydrates, and Fat) tell you more about your recipe, intake, or meal plan than any other two factors. Many diet plans are defined by these two factors. If your software doesn't tell you the calorie level and PCF Ratio for every recipe, nutrient intake, meal, and meal plan, it's withholding important information.

Can you open multiple windows simultaneously? For example, it could be handy to be able to open, say, the intake dialog, the food name search dialog, and the nutrient data to the screen all at once. This arrangement allows you to conduct a food name search, see the results in a spreadsheet view, then see it in the intake manager when it is selected.

Does the software package feature intelligently designed screens that provide an intuitive interface to the software's capabilities? All the features in the world cannot overcome a poorly organized user interface.

Internet-Related Considerations

The new millennium will usher in the Age of the Internet. Thousands of dietitians, medical and health professionals, sports and fitness experts have already set-up shop on the Web. Even if you decide not to follow these pioneers, you can be assured that your clients and colleagues will. ("Be there or be square.") Although Internet-enabled features for nutrition software are still in their infancy, there's no question that nutrition software is poised to provide more and more support for professionals doing business on the Internet.

Can you save your reports, analyses, and documents as a Web Page (in HTML format)? You should be able to save any report, analysis, or document you produce in HTML format for instant publication on the World Wide Web. More and more dietitians are doing business on the Internet, and this trend is expected to accelerate. HTML support makes it easier to provide a "recipe-a-day" capability to your Web Site.

Can you drop a questionnaire on your Web Site and let surfers provide you enough information so you can log them on as a client in your software? In this process, all client contact data is automatically entered into your nutrition software's client contact database and all the personal information is automatically used to log on each client. This sets the stage for providing that surfer with an array of services. You can also provide a free email newsletter. And since you have the client's personal information, you know which newsletter to email to him or her. If the assessment report and newsletters are provided without charge, and if you learn how to drive traffic to your site, it may not be unreasonable to collect a 100 or more forms a day. 100 submissions a day times seven days is 700 potential clients a week... 700 times 52 is... well, you get the idea.

Network Version Considerations

If you work in a small office, hospital, clinic, or educational facility and share the software with other users, a network version of the nutrition software may be the most economical way to purchase software. In addition to saving money, the networked version allows you to share client information, recipes, and meal plans (only if you want to share them). Network versions also make a lot of sense in educational facilities where students can access the software for assignments from any PC on campus.

Does the software provide password protected log-on for all users? This assures that only authorized users log on to the system and access your client information, recipes, meal plans, etc. Also, by knowing who the user is, the software can make decisions regarding what information he or she is allowed to view, modify, and/or delete.

Can the "master user" (the person in charge of the software) allow full unrestricted access to all functions of the software to all users? This allows all users to share all resources. All users can see each other's work. And they can also modify and/or delete each other's work. (This works best in a small office situation where trust, harmony, and frequent backups abound.)

Can the "master user" assign partially restricted access to all functions of the software to all users? This allows all users to see and use each other's work. But they can only modify and/or delete their own work.

Can the "master user" assign fully restricted access to all functions of the software to all users? This allows all users to use the software. But they can only see, modify, and/or delete their own work. They cannot see, modify and/or delete anyone else's work. This is a practical setting for educational facilities.

How long does it take to load a recipe or meal plan? This is very important in a multi-user environment because many of these programs require 10 to 20 seconds to load a single recipe. Multiply this by 50 users and you've got a 10 to 15-minute bottleneck. Beware of slow load times... the software maker will be happy to sell you their network version, but the software could well choke and sputter under a full load. Look for recipes and meal plans that load instantly. If in doubt, the best bet is to ask the software maker how the software will behave under peak load conditions.

Pricing and Product Support

As in all areas, price and value are not always directly proportional. Product support, update, and upgrade policies vary widely. When evaluating a software package, it's a good idea to call the company's support line to see if they can answer a few of your technical questions... if they can't help you with your general questions before you buy, they probably won't be much help for your specific questions after the sale.

Does the company provide Toll-Free technical support? Let's face it, all software makers tell you their software is user-friendly and easy-to-use. Look for a company that backs up these claims by providing you with toll-free technical support. Fortunately, most companies today have learned that toll-free support is a requirement for complex high-end software applications.

How much do software "updates" cost and can you download them from the Internet? The best price I've found for "updates" is free. "Updates" are the interim releases that fix any bugs reported in the earlier releases. If they aren't included with your initial cost, you need to find out before you buy what they will cost you. And if they aren't available for downloading, there should be a reliable notification system in place to let you know when updates are released and how you will receive them. If the software maker doesn't make it clear how this is handled, ask them.

How much will "upgrades" cost you? After you've made the initial investment in a software package, you may be able to obtain major new releases of the software – "upgrades" - at a discount. But beware – this isn't always the case. "Upgrades" are major new releases of the software that include major new features and/or major revisions to the nutrient database. ("Version 1.1" is usually an update; "version 2.0" is usually an upgrade.) Ask the company who

markets the product of interest what their upgrade policy is. The best package values offer discounts to registered users. Some don't. Know the policy before you purchase.

Are there features of the software that are only available at extra charge? For instance, it could cost an additional \$600 to add a publication-quality Nutrition Facts label-making component to your software. That's not necessarily bad, but you should know about these costs prior to purchasing.

Is there an annual subscription fee you need to pay? Find out if you have to pay a periodic fee for updates. Some companies charge you \$300 a year or more for updates. This is not always clearly stated when you purchase the software. Sometimes, you don't find out about this policy until you receive a bill in the mail one year after your purchase. Again, this isn't necessarily bad – you just want to know what you're getting into before you get into it.

How to Select a High-End Nutrition Software Product

While the questions in this article are by no means exhaustive, they do touch on the major categories of features available in the marketplace at this writing. If you read and understand what most of these questions are alluding to, you're ready to conduct a search for the software that will best suit your needs. But you still need a plan. Advertisements from the software makers don't really help much. Most software nutrition advertisements actually tell you very little about what the software actually does, except in the vaguest of terms. (And really, it's not their fault – it's just not possible to tell you everything you need to know to make a purchase decision based on a single page of text.)

Most dietitians would agree that the very best way to evaluate software is to obtain demos or, better yet, purchase the packages outright and put them through their paces. But this method has obvious drawbacks. Not many professionals have the time, the money, or the motivation to purchase and learn how to use several software packages (only to discard most of them). Most of us feel that learning one high-end nutrition software program is work enough for one millennium. So that brings us to the next best way to select nutrition software: point your browser to the web sites of the major professional nutrition software companies. (Their web addresses and phone numbers are provided in the sidebar.) Look at what they have to say. Then contact them and ask a few questions!

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