

## Needs Analysis: Steps to Appropriate Prescription and Program Design

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Too often an individual will read an article or magazine and implement a printed workout into his / her routine without asking the most vital question, "is it appropriate for me?" Identifying appropriate exercise prescription and program design at times can be extremely challenging for personal trainers and coaches. This challenge is magnified for neophytes and great care must be taken in printing workout plans.

As personal trainers / strength and conditioning coaches we should endeavor to systematically outline the needs of our clients and educate them as to an appropriate method of exercise prescription and program design. It is not enough to "just train people" you must also educate them as to how you develop your plans for them. This education process will enable your client to make wise decisions if he / she is ever tempted to implement a printed workout from a magazine into his / her training regime. Here is an eight-step plan that has been helpful for me in establishing programs for individuals with modest goals to national level athletes.

**One, start with a "needs analysis of the activity or the sport" with which your client is involved** (keep in mind that an activity can even include working on an assembly line in a factory, whereby the client will have specific overuse issues). This analysis must include a general biomechanical analysis of the activity / sport. Video tape can be very useful during this initial stage of your investigation and research. Furthermore, you must analyze the energy systems that will be utilized and taxed during the activity / sport. Also vital to your analysis should be a study of common injury sites. For example, if your client is a postal worker, there are shoulder nerve impingement issues that you must be aware of if your client does not have an ergonomically designed pouch. If your client is a junior national butterfly swimmer, shoulder problems could also be a potential problem but unlike that of the postal worker.

**Two, the most important step in dealing with your client, "a goal setting consultation."** Often a difficult step for some people to take, goals must be quantified and qualified. Ensure clients categorize goals in to short term (two to three months) and long term (six to 12 months – or even longer). As a professional you will be able to determine whether your clients' goals are realistic and guide them in their pursuit of goal achievement. However, caution must be taken -- ensure that you are aware of your role, to help your client in goal achievement. Do not take responsibility for setting your clients' goals.

**The third step is a "needs analysis for the individual."** What is your client's specific case history, health conditions and health concerns? What is his / her somatotype? Genetic predisposition regarding V02max, muscular strength, and flexibility? What are his / her recent and past injuries? Has your client given in-depth thought about goals and appropriate time frames? What is your client's personality type and time availability for training? Still in the investigative stage of the process, the answers to the above questions (and many more questions not listed) will better enable you to create a program plan for your client.

**The next step, "the fitness evaluation"**, enables you to gather imperical data about your client. Your testing procedure should include the following; resting heart rate, blood pressure, and athropometrics. Direct or indirect V02max testing to determine cardiovascular endurance. Relative and /or absolute muscular strength and endurance tests. Activity / sport specific body segment flexibility testing and if appropriate for your client, anaerobic and proprioceptive capabilities should be tested as well.

The testing process serves many purposes. It will further enable you to identify whether your client's goals are realistic. It will serve as a base line from which you can gauge progress. It will also provide evidence as to the appropriateness of your exercise prescription over time.

**The fifth step in the process is creating a "general yearly training plan (YTP)."** This step is only effective if you and your client have taken the time to discuss his / her goals in detail. I will draw upon my personal experience from two people I have dealt with in the past year. At the end of a 12 month period (long term goals) one person had a goal of doing 100 push ups, the second person wanted to qualify for the World Triathlon Championships. In both cases I created a YTP starting from the goal date and worked backwards to the day that each of them had the initial fitness evaluation. In this type of a situation you will create the ideal plan that you would hope the client is able to follow as they progress towards achieving his / her goal. Creating a YTP also eliminates any guess work, greatly diminishing the chance of injury due to over training. In creating a general YTP (which in some cases can be considered your macrocycle) you will identify your mesocycles.

**After creating a general YTP you should then take greater time in creating a "specific YTP."** Continuing with the example of the triathlete from above, the specific YTP will involve a greater focus on not only the mesocycles but also the microcycles of training. I use a periodized model of an unloading phase every three to six weeks (based on the individual's ability). Furthermore, qualifying local, provincial and national race dates will also be identified and recorded. This will be the plan that you will have to modify more often over the course of a year due to unforeseen circumstances (family, work commitments, etc.).

**The seventh step in dealing with your client is to work within each microcycle of training.** Or stated another way "creating

detailed weekly and daily workout plans." Following the needs analysis of the activity / sport, the needs analysis of the individual and the fitness evaluation, you would have been able to answer specific questions about creating your detailed program plan. Your detailed workouts will focus on specific contraction types, movement patterns, similar forces and velocities that your client will experience during his / her activity / sport. If your client is the postal worker or factory assembly line worker it is important to create a program that will take into consideration specific overuse issues that each will face throughout the course of the day. If your client participates in sprint, Olympic or Ironman triathlons you must again be aware of the specificity of training and create a program that will focus on all of the above issues.

**Finally, the eighth step is ongoing and involves "constant evaluation and reevaluation" of all of the first seven steps.**

Feedback must be constant from you to your client and from your client to you. In the feedback process you and your client should (on a daily basis) be aware of his / her resting heart rate, sleep patterns, hours of sleep, appetite, will to train, mood, energy levels, muscle soreness, mental and physical fatigue (just to name a few factors). You will want to be aware of any signs of over training in addition to the productive nature of your prescribed program design.

In conclusion, having an systematic method of dealing with your clients will enable you to do your job more effectively. Educating your clients (if they are willing and interested in learning) will enable them to train smart, always being mindful of the end goal(s). A needs analysis of the activity / sport, goal setting, needs analysis of the individual, fitness testing, general yearly training plan, specific yearly training plan, creating daily workouts and constant evaluation will help you in appropriate prescription of training and enable your client to achieve his / her goals with in a systematic and safe method.

**References**

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