

Covering All Bases: Working With New Clients

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Learning Objective

To learn about the five critical components of developing an exercise program.

Key words: Pre-Participation Screening, Risk Factors, Exercise Prescription, Cardiovascular Diseases, Fitness Assessment.

When working with a client, especially a new client, many issues need to be considered by the fitness instructor or personal trainer. It is important to determine what exercises and exercise equipment are most appropriate for and available to the client. Most trainers devote considerable energy to ensuring that these decisions are made in the best interests of the client. However, when developing an exercise program, a trainer's concerns should extend far beyond these decisions, and, unfortunately, these other concerns are often overlooked. For example, does the client have any medical conditions that would affect how, or even if, an exercise program should be developed? Are there any significant cardiovascular risk factors present? What are the client's goals? What is the best way to achieve these goals? Are other experts, such as a Registered Dietitian, needed to assist the client in reaching these goals?

A number of excellent references, most notably ACSM's *Guidelines for Exercise Testing and Prescription* (1) and the companion *Resource Manual* (2), can be used to determine how best to address these concerns. Unfortunately, in a busy fitness center where new members are joining every day, it is relatively easy to forget to consider all these issues with every client. Moreover, remembering all of the details associated with working with a client can be overwhelming if someone is still learning the art and science of personal training. Nevertheless, these details should not be overlooked, because doing so is not in the best interests of either the client or the personal trainer. Consequently, the purpose of this article is to introduce a guide, MR IPL, that will serve as a blueprint for less experienced fitness professionals to remember the important issues to be considered when developing a program for a new client.

MR IPL is an acronym of the five important areas to consider when working with a client and the order in which to do so (Table):

- M: Medical history
- R: Risk factor assessment
- I: Interpreting the data
- P: Prescribing the exercise
- L: Lifestyle counseling

In practice, the pre-participation health screening represented by "M" and "R" are intertwined. They are separated here to emphasize that each provides unique information to the personal trainer. In the acronym, they are

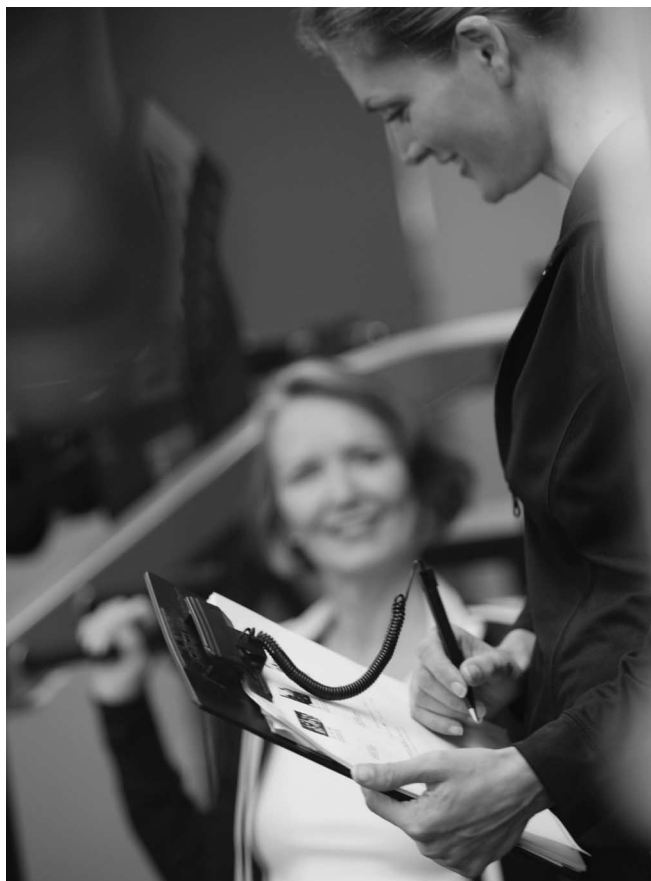


Table. MR IPL

(M) **Medical History.** You will risk stratify the client. In other words, you will determine whether the client is appropriate for your facility, needs more extensive medical evaluation, has special needs or should be referred to a different facility. If they can join your facility, you will determine whether the client has any clinical history which warrants modifying what you would do for him/her and/or how they would function in your facility.

Information needed: Informed consent, Medical history, Physician feedback, CVD risk factor information, Results from a fitness assessment

You risk stratified the client based upon ALL of the following:

- 1) Signs and symptoms of disease (Box 2-1 of ACSM's Guidelines).
- 2) A medical history (at the minimum, use Fig 2-1 of ACSM's Guidelines) and
- 3) Personal physician feedback.
- 4) You also need to consider the client's CVD risk factors but will do so with "R" below.
- 5) Gather additional information in a discussion with client.
- 6) ONCE accepted into your program, perform a fitness assessment.

(R) **Risk Factor Assessment.** You will identify your client's most significant CVD risk factors, prioritize them (e.g., which need to be modified first) and be able to give feedback to your client about how his or her 10 yr risk for developing CVD will change with modifying these risk factors. You will address how to modify these risk factors with "L" below.

Information needed: CVD risk factor information

You have identified the following:

- 1) The client's risk factors for CVD (Table 2-1 of ACSM's Guidelines).
- 2) Which risk factors can be modified and which can not be.
- 3) Goals for each risk factors (e.g., LDL goal of <100 vs. 130 vs. <160 mg/dL).
- 4) His/her 10 yr risk of developing CVD (Framingham algorithm, see Grundy et al. 1999).

(I) **Interpreting the Data.** You will assess the completeness and quality of the client's fitness assessment and begin thinking about what the client's exercise program should consist of.

Information needed: Results from a fitness assessment

You did the following:

- 1) Checked to be sure the fitness assessment included all 5 components of fitness (i.e., cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition).

Table. Continued

- 2) Are confident the assessment was done well.
- 3) Determined how your client did on each of these components by comparing him/her to age- and gender-specific norms (see Chapter 4 of ACSM's Guidelines).
- 4) Prioritized the components which most need to be improved.

(P) **Prescribing the Exercise.** You will develop a complete exercise prescription that is appropriate for the client, taking into consideration the client's current fitness level and achieving a balance between the client's goals and the client's true needs.

Information needed: All data from the 'M,' 'R,' and 'I'

You did the following:

- 1) Talked to the client to ascertain goals regarding the exercise program but also determined client's overall health goals.
- 2) CAREFULLY considered the client's goals vs. the client's needs. Based upon data gathered with the 'M,' 'R,' and 'I,' are the client's goals consistent with what you think the client should be working on?
- 3) Developed a COMPLETE exercise prescription (Ch. 7 of ACSM's Guidelines for Exercise Testing and Prescription), which was SPECIFIC to this client and appropriately balanced the client's goals vs. needs.
 - a) If the program was for cardiovascular fitness, it included the components of frequency, intensity, duration and activity (FIDA). Ideally, it included the workloads (e.g., treadmill or cycle; Appendix D of ACSM's Guidelines for Exercise Testing and Prescription) consistent with the prescribed intensity.
 - b) If for weight loss, it included FIDA, workloads and caloric expenditures (Appendix D of ACSM's Guidelines for Exercise Testing and Prescription) associated with this program.
 - c) If for resistive exercise, it includes the variables of choice of exercises, order of exercises, frequency of training, loads to be used, the volume of training, and rest intervals within and between workouts. Ideally, it included some considerations whether periodization would be appropriate.

(L) **Lifestyle Counseling.** Using these tools, you will counsel the client on how to make the lifestyle changes needed to achieve his/her goals. This will include an integration of the suggested exercise, dietary, and CVD risk factor reduction changes. You will also inform the client of the rationale underlying the program that you have developed.

Information needed: All data from the 'M,' 'R,' 'I,' and 'P'

You identified, both SPECIFICALLY and IN DETAIL, how the client can make the desired lifestyle changes.

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Table. Continued

Depending on the client, this included how to do the following:

- 1) Modify cardiovascular disease risk factors, including exercise and dietary changes.
- 2) Begin as exercise program to reach goals.
 - a) If CV exercise, it included modifications appropriate for the client's exercise and clinical history.
 - b) If to lose weight, it included an exercise program (focusing upon the appropriate exercise prescription) and dietary changes (including consideration of the Food Guide Pyramid, the Therapeutic Lifestyle Change Diet, USDA Dietary Guidelines).
 - c) If beginning a program of resistive exercise, it included consideration of the client's exercise and clinical history.
- 3) When appropriate, you suggest referring the client to a specialist, *e.g.*, registered dietitian for dietary changes, physician for prescribing lipid-lowering medications, or counselor to assist with smoking cessation, stress management, etc.

separated from "IPL" to emphasize that they need to be addressed before completing the latter three areas. With pre-participation screening, an important first step when working with a new client is risk stratification. Risk stratification means that you screen the client well enough to decide whether a) it is appropriate for you to work with that client in your facility, b) the client should be referred elsewhere for further medical evaluation prior to starting an exercise program, c) the client is better served in a more medically supervised program, or d) the client should not exercise (1, 2). Besides the health status of the client, factors influencing this decision are your education and experience with this type of client, unique facility characteristics, such as the training of other personnel in your facility, the emergency procedures in place, and the clientele for which the facility is designed (3). For example, most personal trainers recognize that a fitness center catering to bodybuilders is not the most appropriate facility for a 75-year-old man who underwent coronary artery bypass graft surgery, just completed a hospital-based cardiac rehabilitation program, and is now looking for a facility to continue exercising. However, would a more typical fitness center be appropriate for this man's wife, who is similarly aged, has not been diagnosed with heart disease, but has multiple cardiac risk factors? Completing the components outlined in "M" and "R" will ensure that you risk stratify this couple and ultimately make correct decisions regarding what to do with them.

The "M" in MR IPL prompts you to investigate a client's medical history and provides guidance on how to do so. A simple but effective tool for evaluating the health status of a new client is the Physical Activity Readiness Questionnaire, or PAR-Q (1, 2). Alternative screening tools can be found in these references and elsewhere (3). The "R" guides you in completing the pre-participation screening by prompting a review of the client's cardiovascular disease risk factors (1, 2). A useful tool in determining a client's overall risk is the Framingham algorithm (4). An advantage of the algorithm is that it enables you to quantify the relative severity of individual risk factors. For example, how much more does a total cholesterol of 240 mg/dl contribute to heart disease risk compared with a value of 220 mg/dl? In addition, the score derived from the algorithm provides you with insight into the relative risk of your client compared with other people of a similar age and gender. A disadvantage of the algorithm is its dependence upon selected risk factors, that is, age, total cholesterol, HDL cholesterol, blood pressure, smoking status, and diabetes status (4).

Many personal trainers perform fitness assessments on their clients. This assessment is the *last* step in "M." In other words, you should *not* perform a fitness assessment until *after* you have risk stratified the client and determined that it is appropriate for you to work with him or her. After your client has completed the fitness assessment, focus on "I," or



interpreting the data. Note that the first two components of “I” (Table 1) prompt you to review the fitness assessment for thoroughness and, if you did not administer the assessment yourself, remind you to consider the quality of the assessment. These two steps are important but easy to ignore. For example, suppose you have a client who lost 20 lbs after exercising for 3 months. Based upon the skinfold measurements done during fitness assessments performed before and after this 3-month period, his body composition did not change. You *know* he has lost body fat, but you do not know why it is not apparent in his body composition assessment. The skinfold technique for assessing body composition is fairly accurate when performed by a skilled technician but can be woefully inaccurate when performed poorly, for example, when incorrect skinfold sites or an inappropriate pinch technique is used. In this case, two different technicians may have performed the two fitness assessments, with the second assessment performed by the less skilled technician. Thus your client’s body composition likely changed, but, because of measurement error, it was not detected during the assessment. Taking the time to consider whether the assessment was done well, that is, the first two components of “I,” led you to determine this.

The second two components of “I” guide you in using the client’s assessment results to develop the exercise prescription. First, compare your client’s results with age- and gender-specific normative data. Doing so makes it easier to evaluate the relative fitness of your client, to explain these results to the client, and to determine what fitness components need to be prioritized with the exercise prescription. For example, in performing a fitness assessment on a 45-year-old man, you determine that he weighs 242 lbs, has a body composition of 29% body fat, and has a maximal bench press of 225 lbs. When discussing his goals, he states that he “wants to get in better shape” and “look more toned.” Professional experience tells you that his upper body strength is good, but 29% body fat

is too high. The latter also increases his risk for several chronic diseases, such as diabetes and heart disease. Thus you think that your client should, at least initially, focus upon reducing his body fat rather than toning up, or weightlifting. How do you convince your client to modify his fitness goals? Normative data will help. From Table 4-7 of the *Guidelines* (1), you see that his maximum bench press/body weight ratio of 0.93 (*i.e.*, $0.93 = 225$ pounds on the bench press/242 lbs body weight) places him in the 70th percentile or “above average” category compared with other men his age. Table 4-3 of the *Guidelines* (1) indicates that 29% body fat is in the 10th percentile or “well below average.” Thus, you can tell him that he is stronger than 70% of his peers but leaner than only 10% of them. Percentage body fat and bench press/body weight ratio are esoteric terms to him. However, with these peer comparisons, he can readily comprehend that his body composition is relatively worse than his upper body strength. Thus the use of normative data makes it easier for you to evaluate the results of the fitness assessment, correctly prioritize the exercise prescription, and educate your client about these results.

As you can see, using norms makes it easier for you to begin working on “P,” or prescribing the exercise. Norms enable you to determine what the client *needs* to work on. However, it is critical that you determine what your client *wants* to work on, or his or her goals, both in terms of exercise and overall health. This assessment is the first component of “P.” The second component of “P” entails weighing these “needs” versus these “wants” and finding an acceptable middle ground between the two. The third component provides reminders of what should be included in well-developed exercise prescriptions that address the most common client goals. These goals are improving cardiovascular fitness, losing weight, and developing muscular fitness. The expertise needed to develop these exercise prescriptions is far outside the scope of MR IPL. However, good starting points for developing this expertise are the references (1, 2), attending ACSM’s Health & Fitness Summit & Exposition, or attending a Health/Fitness Instructor’s Workshop. In other words, MR IPL prompts you to remember the important aspects of a complete exercise prescription, but it remains up to you to develop the prescription.

Finally, the last component of MR IPL, “L” or lifestyle counseling, reminds you that an exercise prescription should be more holistic than simply providing an exercise program and that adopting this prescription requires changes in the client’s behaviors. Unfortunately, it is not uncommon for both clients and personal trainers to focus largely on *just* an exercise program. The “L” components help guide



you in developing a more global *wellness* prescription while remembering the unique needs of the client. These needs may include considering the unique needs of a beginning versus a long-term exerciser as well as steps to improve the client's overall health. For example, beginning exercisers are much more likely to drop out from a program; consequently, the nature and extent of your personal training interactions will likely differ between a beginner and an experienced exerciser. In addition, helping the client improve his or her health may entail referral to a specialist, such as a Registered Dietitian. As with "P," blending these different aspects together into a coherent, cohesive program depends upon your professional expertise.

Conclusion

In some ways, being a health/fitness professional is analogous to being a professional carpenter. All carpenters have toolboxes, but the toolbox of a more experienced carpenter is likely better equipped than that of a beginner. As health/fitness professionals become more skilled and more knowledgeable, they add "tools" to their professional "toolbox." For example, one tool that an entry-level personal trainer should have is the ability to recognize the major risk factors for cardiovascular disease. A more experienced personal trainer would have this tool as well as other tools related to how to modify these risk factors. As with professional carpenters, a personal trainer's "toolbox" can become cluttered and disorganized; it then becomes difficult to find the right tool when it is needed. The guide presented in this article, the MR IPL acronym, will not replace the professional expertise and judgment, or tools, needed when working with a client. However, it should make it easier to keep a professional toolbox organized by enabling the fitness professional to remember what and when particular "tools" are needed.



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References

1. American College of Sports Medicine. *ACSM's Guidelines for Exercise Testing and Prescription*. Franklin, B.A., M.H. Whaley, and E.T. Howley (Editors). New York: Lippincott Williams & Wilkins, 2000.
2. Gordon, N. Preparticipation health appraisal in the nonmedical setting. *ACSM's Resource Manual for Guidelines for Exercise Testing and Prescription*. Roitman, J.L., M. Herridge, M. Kelsey, et al. (Editors). New York: Lippincott Williams & Wilkins, 2001.
3. Balady, G.J., B. Chaitman, D. Driscoll, et al. Recommendations for cardiovascular screening, staffing, and emergency policies at health/fitness facilities. *Medicine & Science in Sports & Exercise*[®] 30:1009–1018, 1998.
4. Grundy, S.M., Pasternak R., Greenland, et al. Assessment of cardiovascular risk by use of multiple-risk-factor assessment equations: A statement for healthcare professional from the American Heart Association and the American College of Cardiology. *Circulation* 100:1481–1492, 1999.

Condensed Version and Bottom Line

An exercise prescription should encompass more than just instruction for participation in an exercise program; it should include a plan to improve the client's overall health through reducing his or her risk for developing chronic diseases. Thus, when working with a client, a personal trainer should begin with pre-participation screening, pay due attention to relevant fitness assessment data, and consider lifestyle changes associated with adopting a program of regular exercise. Remembering and adhering to the MR IPL acronym (medical history, risk factor assessment, interpreting the data, prescribing the exercise, and lifestyle counseling) will ensure that all critical aspects of developing an exercise program have been considered.