



Movement Pattern Continuums: A Fundamental Component of Personal Training

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Movement patterns exist on a continuum, with regressions forming the left side of the continuum and progressions forming the right side. Though these continuums represent a fundamental aspect of program design, many personal trainers have not mastered the concept. This article will discuss the art and importance of movement pattern continuums—an often overlooked aspect of personal training.

Years ago, I recall watching a popular fitness television show where the contestants competed to see who could lose the most weight. The show featured dynamic personal trainers, some of whom took pride in their militant styles. One particular episode made my jaw drop. The trainer prescribed two different exercises for obese clients—step-ups and push-up isoholds. When observing the contestants performing the step-ups, it became quickly evident that the chosen step height was too high. Though one foot was on the ground and one was on top of the step, contestants were essentially propelling their bodies upward with both legs and

then catching themselves on top of the step in a quarter-squat position before standing upright. One of the contestants became dizzy and fell. The trainer barked that he “didn’t want it bad enough.” In the case of the push-up isoholds, the contestants were instructed to hold themselves in the top of the push-up position for 1 min. One contestant in particular was unable to hold herself for any amount of time. She, too, was told that she “didn’t want it bad enough.”

What is wrong with this practice? After all, clients often hire personal trainers for their motivational skills. Was the aforementioned trainer helping clients by prescribing overly challenging exercises and yelling at them like a drill sergeant? Or was the trainer doing more harm than good by engaging in poor training practices and berating them?

Rationale

Let us break down the personal trainer’s goals in this example. The trainer’s population is obese clients. Through nutritional interventions, these clients will presumably be losing significant amounts of weight over time. By incorporating resistance training, the trainer is hoping to increase weight loss through increased caloric expenditure, and to build or maintain muscle mass while the pounds are shed, thereby targeting the loss of fat as opposed to lean tissue. The obese clients are new to resistance training and are therefore uncoordinated, unstable, weak, and insecure. Step-ups and push-up patterns will strengthen the quadriceps, gluteals, pectorals, anterior deltoids, and triceps—all are important muscle groups for functional strength and physical aesthetics.

By starting off with the simplest of movements, clients build self-confidence and better enjoy their training sessions. Bodyweight movements are often too challenging for obese clients. For example, light dumbbell pressing movements could be chosen rather than push-up variations until bodyweight drops and sufficient shoulder strength is achieved to enable successful push-up performance. And, although step-ups are a great exercise, bilateral strength should be prioritized before unilateral exercise prescription. Therefore, a bilateral squatting movement might have been a better exercise selection in the aforementioned situation. Nevertheless, with proper knowledge of movement pattern continuums, step-up and push-up variations could have been successfully employed even with this population of clients.

Let us imagine that this personal trainer possessed sound knowledge of movement pattern continuums. The trainer would know that step-ups can be modified, or regressed, in several ways for deconditioned clients. Most obviously, the height of the step can be reduced. For beginner, obese, or elderly clients, it is often ideal to employ step-ups from roughly a height of 6 in. in order to produce the desired training effect while allowing for the development of proper movement patterns. Other strategies

can be employed as well, such as initially holding onto the client’s hands or providing an object for the clients to utilize for balance.

The trainer in this example would also know that push-up isoholds can be modified for deconditioned clients in two basic ways. First and foremost, by elevating the torso on a table, bench, or bar of desired height. And second, by shortening the lever length by performing the movement from the knees. Both of these strategies reduce the loading requirements on the shoulder musculature.

Scenario One

Let us review the effects of the personal trainer’s decision in the previous example. By employing exercises that were overly challenging, the trainer failed to deliver optimal performance adaptations and likely elicited negative psychological adaptations.

By performing step-ups from too high of a height, the obese client was not developing single-leg stability since he was utilizing both legs to propel the body upward and catching the body at the top of the step. Moreover, the client reinforced poor motor control and failed to improve step-up patterning since his form was not ideal. Of potentially greater importance is the fact that the embarrassment from falling and the fear from experiencing dizziness could very well produce long-lasting harmful psychological effects. This coupled with the berating and insistence that he “didn’t want it bad enough,” is downright humiliating. Luckily, the client did not sustain injury when he fell, sparing the personal trainer of potential litigation.

The same can be said for the obese client asked to perform a push-up isohold. Since the client could not hold herself for even a one-second count, she failed to improve shoulder strength or endurance. And due to the fact that she was also told that she “didn’t want it bad enough,” she too was humiliated. This client could have sustained injury as well if she would have face-planted into the ground when her upper body muscles failed, but fortunately this did not occur in this example.

The already unconfident clients probably felt ashamed of their poor physical abilities and now have aversions to step-ups movements, push-up movements, and resistance training in general. These are common reasons why personal training clients quit personal training and choose to write off resistance training for the rest of their lives.

Scenario Two

Now, let us hypothesize the effects of a proficient and well-versed personal trainer in this same situation. This trainer prescribes a low step-up from a 6-in. box. For the first set, the trainer holds onto the client’s hands to improve confidence and coordination. On the subsequent set, the trainer has the client perform the movement on their own. The exercise is well within the client’s capabilities, and the trainer compliments him every step of the way. On the

second set, the client achieves 12 steps with each leg with perfect technical form on his own. The trainer increases the step height to 8 in. on the third set, and the client achieves eight repetitions with sound form. The trainer is sure to praise him and encourage him throughout the workout.

With the other client, the trainer prescribes torso-elevated push-up isoholds from the knees with the client's hands positioned on an 18-in. step. This is rather easy for the client, and the trainer informs the client of her progress and that she is ready for a more advanced version. This builds self-esteem and enjoyment. The trainer then has the client perform the isoholds from her feet. The client is able to perform the movement for 25 s. The trainer praises her client and tells her that once she reaches 60 s in future training sessions, she will drop the step height 6 in. at a time until she is able to perform the movement from the floor. This teaches the client program design and progression principles so they better understand the training methods.

In the examples in scenario two, proper neural patterning and motor control is developed. Muscles and movements are strengthened in the desired manner, and metabolic rates are increased. Muscle mass is spared while fat is targeted for weight loss. Confidence and self-esteem are built, and most importantly, the client enjoys the training and develops an affinity for resistance training. This cannot be said about scenario one.

Conclusion

I hope that this article has emphasized the importance and value of movement pattern continuum knowledge for personal training. It is a fundamental component to program design, and has implications for motor control development, strength and stability development, self-esteem development, resistance training enjoyment, and liability issues pertaining to injuries. Personal trainers should take time to jot down their simplest regressions of basic movements for the weakest and least coordinated beginner clients, in addition to jotting down their most advanced progressions for the strongest and most talented athletic clients. The continuums will vary according to the personal trainer's clientele, preferences, and equipment availability. I recommend developing movement pattern continuums for squat, deadlift, hip thrust, push-up, inverted row, and pull-up motions. In closing, below is a sample movement pattern continuum for the squat:

bodyweight high box squat – bodyweight medium box squat
– bodyweight low box squat – bodyweight parallel free squat –
bodyweight free full squat – goblet full squat – barbell front squat
– barbell back squat – pause barbell front squat plus chains –
barbell back squat plus bands. ■

ABOUT THE AUTHOR

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