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Personal Training Quarterly (PTQ) publishes basic educational information for Associate and Professional Members of the NSCA specifically focusing on personal trainers and training enthusiasts. As a quarterly publication, this journal's mission is to publish peer-reviewed articles that provide basic, practical information that is research-based and applicable to personal trainers.

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HEART RATE VARIABILITY FOR PERSONAL TRAINING—PART I

CARMINE GRIECO, PHD, CSCS, AND LACEY HOOK

This article is the first of a two-part series.

BACKGROUND

Heart rate variability (HRV) is quickly becoming a “buzzword” in fitness, but in reality, this is a very old methodology. Dating back to at least 1948, HRV testing has been a commonly used method in research and is an accepted diagnostic tool for several diseases and conditions, such as post-traumatic stress disorder and type 2 diabetes (9,15,23). HRV testing was, until recently, confined to clinical and research settings, largely due to the prohibitively high cost of equipment. However, recent advances in technology, particularly among heart rate monitors and smartphone-based apps, have now made this technology readily available to fitness professionals and consumers.

HRV is derived from the mathematical properties of cardiac inter-beat intervals, or what is referred to as an “R-R” interval. This inter-beat interval represents miniscule changes in the timing (i.e., fractions of a second) from one heartbeat to the next. Intuitively, it would seem that a heart rate of 60 beats per minute (bpm) would have exactly one second between each “beat.” It even seems reasonable that a very metronomic or steady heart rate would be indicative of good health. In fact, just the opposite is true; a healthy cardiovascular control system typically has a high level of complexity, or variability, while an aged, unfit, or diseased system usually has a loss of complexity or variability (21).

HRV testing is an extremely sensitive method that is capable of providing important health and fitness-based information across a wide range of populations, from elite athletes to sedentary,

post-myocardial infarction individuals. However, that sensitivity cuts both ways. More so than most other physiological tests, HRV testing is sensitive to outside influences that can alter results, sometimes to the point of rendering the test meaningless. For that reason, the purpose of this article is to review the physiology behind HRV testing.

While the physiology can seem a bit daunting, anyone can easily experience a component of HRV with a very low-tech tool—fingers. For instance, measuring a pulse at the carotid or radial artery is an example of one type of HRV testing. A phenomenon known as respiratory sinus arrhythmia can be observed through this method. When breathing slowly and deeply, there is a notable difference in heart rate speeds between inhalation and exhalation, with inhalation speeding up heart rate and exhalation slowing it down. This is a great example of HRV at work. HRV testing is simply a process of measuring the instantaneous contractile rate of the heart. The instantaneous heart rate reflects a very dynamic underlying process which is being largely driven by the autonomic nervous system (ANS).

OVERVIEW OF THE AUTONOMIC NERVOUS SYSTEM

The ANS handles all of the body’s unconscious physiological functions. A simple way to conceptualize the ANS is as the software programs that are running in the background of a computer at all times. For example, when the body’s internal temperature goes up, the ANS automatically kicks in, resulting in sweat to cool the body down. Without this complex software program running in the background, each person would have to consciously tell their body to begin the process of perspiration.

Other examples of unconscious processes that the ANS controls include breathing, digestion, thermoregulation, and controlling the rhythm of the heart.

Within the ANS, there are two subdivisions termed the sympathetic nervous systems (SNS) and parasympathetic nervous systems (PNS). This balancing act between the SNS and PNS is commonly referred to as sympathovagal balance. These counterbalancing subdivisions act in a manner that is very similar to the gas and brake pedals in a car. The SNS, or gas pedal, is responsible for initiating the “fight or flight” response. Increased heart rate, blood pressure, respiratory rate, and stress hormone release are associated with engaging the SNS. While the reality of being in a “life or death” situation is not quite as relevant in modern times as it used to be, this system is still seen being dominant in stressful situations, during exercise, or when a person feels like they are in danger.

The PNS, or the brake pedal, is a complementary system to the SNS and is commonly referred to as the “rest and digest” or “feed and breed” system. Since the PNS is regulated through the vagus nerve, many researchers refer to this as the “vagal” influence. Although it dominates during periods of rest and recovery, the PNS is always working under the surface. It is responsible for many processes in the body, including setting the pace of resting heart rate, digesting food, triggering glycogen synthesis, activating salivation, producing urine, and many aspects of sexual reproduction. Therefore, the PNS plays a crucial role in recovery from exercise. Without a healthy PNS (or when PNS function is being suppressed), the essential “relaxed” state that allows these processes to work efficiently cannot occur and physiological efficiency can be compromised.

The rhythm of the heart is controlled in part by the intrinsic pacemaker cells located in the sinoatrial (SA) node. The SA node also receives inputs or signals from the SNS and PNS. In the absence of input from the ANS, the SA node sets a pace of approximately 100 bpm (10). The SNS and PNS effectively battle it out to determine which is going to influence heart rate the most. It is this balancing act between the SNS and PNS that results in minute time differences between successive heart beats. In this manner, the heart can rapidly adapt to changing physiological demands. It is the interaction between the SNS and PNS that provides the variability.

Resting heart rate is largely a reflection of the PNS overriding the intrinsic pace set by the SA node. This is why, for example, it is common to see very low resting heart rates in aerobically trained athletes, while unfit individuals tend to have relatively high resting heart rates.

HRV MEASUREMENTS

While the basic concept of HRV is pretty simple, HRV testing actually requires analyzing this basic mathematical quantity in a variety of different ways. In fact, the term “HRV” could be referring to one of more than 20 different measurements. These measurements break down into three basic categories, or “domains,” referred to as time, frequency, and geometric domains (19).

There is some clinical and scientific utility in all of these measurements. However, from a health and fitness perspective, these four measurements provide the most practical and meaningful measures of HRV:

- The standard deviation of normal to normal (SDNN) cardiac intervals is perhaps the simplest quantity and provides a measurement of overall variability (19).
- The root mean square of successive differences (RMSSD) is universally regarded as a measure of PNS activity (19).
- Low-frequency (LF) power remains somewhat controversial, but most people agree that it primarily represents the influence or power of the SNS (22).
- High-frequency (HF) power is almost universally regarded as a measure of PNS activity (2).

EXERCISE AND HRV

While there is some conflicting evidence, the preponderance of studies suggest that exercise training can improve HRV in healthy populations as well as in special populations such as obesity, type 2 diabetes, and cardiovascular conditions (5,16,17,24). Interestingly, higher HRV measures are also associated with healthy longevity and improved cognitive function in older individuals at risk of cardiovascular disease (14,25). Moreover, a few recently published studies provide evidence that monitoring HRV and modifying training programs accordingly may result in improved physiological adaptation and performance (6,7,8).

The chronic effect of resistance training programs does not consistently show an improvement in resting HRV measures; however, a single bout of both resistance or endurance training appears to temporarily decrease HRV (12,20). Nevertheless, HRV values return to baseline following acute bouts of exercise and appear to follow typical patterns of traditional recovery timing (3). For example, Chen et al. found that young male weightlifters experienced a significant decrease in performance concomitant with a decrease in PNS activity (HF), as well as increased muscle pain and plasma muscle creatine kinase (muscle damage indicator) three hours post-workout (3). Both performance and PNS activity returned to baseline values within 24 hr and increased beyond the baseline at 48 – 72 hr. Therefore, the authors suggest the possibility of using measures of the PNS as a marker of recovery following an acute bout of resistance training.

While improvements in resting heart rate due to the chronic effect of resistance training are equivocal, aerobic exercise training demonstrates consistent improvements across a diverse range of populations (4,11,13,18). The PNS, in particular, appears to be more susceptible to positive adaptation as a result of aerobic training as athletes have shown greater PNS activity in comparison to non-athletes (17). Increases or improvements in PNS function are particularly noteworthy as recovery from exercise is largely governed by the PNS and also serves a cardio-protective role against malignant ventricular tachyarrhythmias (disturbance or irregularity in the heart’s rhythm) (1).

CONCLUSION

Technology is changing the field of strength and conditioning, with HRV testing at the forefront of a wave of high-tech assessment tools that are becoming available to the personal trainer. With wide application across a diversity of populations ranging from elite athletes to cardiac patients, HRV testing represents a new, exciting and affordable technology for the personal trainer. The second article of this two-part series will address the practical application of HRV testing for the professional personal trainer.

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ABOUT THE AUTHORS

A personal trainer with over 15 years of experience, Carmine Grieco recently made the transition from personal trainer to college professor. Recently hired as an Assistant Professor of Exercise Science at Glenville State College, Grieco received his Doctorate degree in Human Movement Sciences from Old Dominion University in 2012. More recently, Grieco accepted a position at Colorado Mesa University. He is passionate about the profession of fitness and is now focusing his time and energy on training the next generation of fitness professionals.

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CONSIDERATIONS FOR OPENING A PERSONAL TRAINING STUDIO OR SMALL GYM—IT ALL ADDS UP

ROBERT LINKUL, MS, CSCS,*D, NSCA-CPT,*D

After years of careful planning, budgeting, creating multiple facility layouts, designing a marketing and business plan, and building clientele, the time has finally come to open a studio or small gym. During this process, a few considerations are often underestimated but should be discussed in further detail. Although these items appear simple, they are often the most complicated to work through. To assist future personal training entrepreneurs in preparing for the next step in their careers, this article focuses on four facility design components that every studio or small gym should address before opening the doors.

SIGNAGE, PERMITS, AND INSTALLATION

There are multiple considerations when looking at signage for a new business. The first consideration is on the main sign that draws consumers directly to the entrance of the business. These signs can be illuminated by using a light box or spotlights installed around it. Depending on the size, complexity, and the materials needed, prices can range between \$1,000 – \$5,000. This estimate is assuming that a logo has already been designed. If a logo has not been designed, then sign companies or graphic designers could create the logo. Logo design prices can range from \$250 – \$1,000, depending on the complexity of the design.

The second signage consideration is the kiosk sign or the corner pillar that alerts consumers to what businesses are in the building or strip mall, if applicable (2). These signs tend to be rather simple in their design and, depending on the complexity, can range between \$50 – \$500. The third consideration involves any additional logos or signs for the doors, windows, or walls inside or outside (prices vary).

The fourth consideration is to schedule an inspection and purchase a permit (1). Prior to any installation being performed (depending on each state's requirements), most states require a building inspector's written approval for the planned location of all signs. After the installation, the inspector may be required to confirm that the job was completed correctly. Once the permit inspection is completed and the payment is processed (payments vary from \$25 – \$250), installation can be scheduled and performed. Installation can vary in price depending on the location of the sign(s) being installed and how much work

needs to be performed to do so, with prices ranging from \$100 to \$1,000. At the conclusion of this process, the owner should confirm that all signs are visible, durable to weather conditions, and well lit.

Final investment: signage, permit, and installation:
\$1,000 – \$7,000

FLOORING, SHIPPING, AND INSTALLATION

Quality flooring serves two purposes: it protects the equipment in the facility and the flooring surface below (e.g., concrete, wood, etc.) from any damage and adds visual appeal. Seamless, bright, and colorful flooring that is neatly cut and tightly fit can make a facility look extremely professional, safe, and clean. The initial investment to purchase, ship, and install quality flooring can be quite large, even for a studio or small gym. Flooring can range between \$2 – \$25 per square foot depending on the quality of the materials, the color(s) involved, and the presence of any logos.

Flooring materials consist of different densities of flooring (typically 3/8, 1/2, and 1 in. cuts) and are available in rolls or in squares. Rolls typically come in pre-cut 30 – 50-ft lengths and can be custom ordered to fit any size needed. Rolled flooring is much easier to cut; however, it can be very bulky, heavy, and difficult to maneuver into position without the assistance of multiple people. Rubber square flooring normally comes in pre-cut 2 x 2-ft mats that interlock together. Cutting these mats can be challenging, but they are much easier to handle and can be assembled by one person. Wood flooring is another good option because it looks very clean, is durable, and can be fairly simple to install. Interlocking boards clip together and seal tightly to prevent tripping hazards and water leaks. However, iron plates, bars, or kettlebells can damage wood flooring if the users are not careful.

Shipping for any flooring product will range in price which is typically based on weight. For example, a 2,500-square foot facility could pay \$5,000 for flooring (\$2 per square foot) and \$1,000 in freight for shipping. Be sure to include glue or double-sided tape to anchor the rubber flooring to the underlying

surface (\$400), tax (\$400), and professional installation (\$2,000 – \$4,000) in the budget.

Final investment: product, shipping, and installations:
\$6,000 – \$9,000

EQUIPMENT, SHIPPING, AND INSTALLATION

Equipment selection depends mostly on the business model that the studio or small gym plans to use. Large group training will require more equipment, whereas one-on-one or small group training may require less equipment.

Regardless of the model, there are a few factors to consider when purchasing equipment. The first consideration is to avoid purchasing used equipment as a main option whenever possible. There is no way to confirm the durability of a product if it has been previously used, so it's a gamble as to its remaining durability. Also, used equipment normally has no remaining warranty coverage if it breaks or has issues. Used equipment can become a liability issue if an accident occurs while using it. It is better to be safe than sorry, so purchasing new and quality equipment is generally recommended. However, there are situations where purchasing used equipment can be an option (for example, having knowledge of its previous use). Purchasing used equipment, while appearing more financially appealing, should always be approached with caution.

Second, small facilities need to maximize their space with multi-purpose equipment that does not take up much space. For example, squat racks can be used for many different exercises and require a 4 x 4-foot space compared to a chest press machine that takes up the same amount of space while only allowing for essentially one exercise. Vertical storage is a great feature for facilities with limited space as some equipment can be stacked, hung, or placed neatly into storage compartments and used as needed.

Third, equipment should be durable, safe to use, easy to clean, and require little-to-no maintenance. For instance, treadmills are expensive, need to be cleaned often, require regular tune-ups, and have many moving parts that can break or need frequent repair work. On the other hand, a rowing machine is extremely durable, easily maintained, and only has a few moving parts that may require repair work. It is recommended to read the reviews and quality reports on products prior to purchasing them, especially pertaining to the equipment's durability, safety, and storage options.

Table 1 provides a sample list of basic equipment needs to give perspective as to the overall investment required to outfit a studio or small gym (3). Prices can vary depending on the manufacturer and the model of each product. Installation can add cost, ranging from \$1,000 – \$5,000, depending on the complexity of the equipment, time needed to assemble the equipment, and labor to install and test the equipment.

Total investment: sample equipment, shipping, and installation (see Table 1): **\$14,040**

FACILITY SUPPLIES

When designing a facility and creating a business model, the majority of the focus is usually placed on installation of signage, selecting flooring, and acquiring equipment; however, there is another category that most business owners do not consider until their doors are nearly, or already, open. Many supplies are needed for day-to-day operations of a facility to help keep it running efficiently. These supplies can include a computer, gym wipes, cleaning supplies, trash cans, hand soap, a vacuum cleaner, and more.

All these little purchases add up quickly, ultimately requiring a large investment to get a facility stocked and ready to operate. The initial investment for these items can range from \$1,000 – \$5,000 depending on the facility size and the standards the business owner wants to maintain (3). After opening day, a periodic “refill” purchase may be necessary in order to keep the supplies adequately stocked. These regular refills can range from \$100 – \$500. Table 2 provides an example budget of the initial supplies needed to operate the studio or small gym (3).

Total investment: facility supplies: **\$5,580**

CONCLUSION

In conclusion, a studio or small gym can have an opening investment of around \$30,000 when forecasting the total costs in all four areas. Along with the price of a business license, liability insurance, and a marketing campaign, a small business could reach \$35,000, or more, as an initial investment (3). Though the investment is great, with smart business practices, the freedom and financial reward that can come from opening and operating a studio or small gym can be worth all the hard work and financial risk.

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Robert Linkul was the National Strength and Conditioning Association's (NSCA) Personal Trainer of the Year in 2012. He is currently a volunteer with the NSCA as the Southwest Regional Coordinator and Committee Chairman for the Personal Trainers Special Interest Group (SIG). Linkul is the Career Development columnist for the NSCA's Personal Training Quarterly (PTQ) publication and speaks internationally on career development techniques for personal trainers. Linkul mentors personal training students and rookie trainers entering the industry on business strategies, client retention, and professional longevity. Linkul has been in the industry since 1999, and owns and operates his own personal training studio in Sacramento, CA.

CONSIDERATIONS FOR OPENING A PERSONAL TRAINING STUDIO OR SMALL GYM—IT ALL ADDS UP

TABLE 1. SAMPLE EQUIPMENT NEEDS FOR A STUDIO OR SMALL GYM (3)

EQUIPMENT	PRICE	QUANTITY	TOTAL
Squat rack	\$2,200	1	\$2,200
Flat benches	\$175	2	\$350
230-lb bumper weight set	\$385	2	\$770
45-lb bars	\$250	4	\$1,000
Collars (5 pairs)	\$180	1	\$180
Landmine units	\$125	2	\$250
Rings and straps	\$115	2	\$230
Rowing machine	\$900	2	\$1,800
Dumbbell set (5 – 50 lb)	\$660	2	\$1,320
Dumbbell storage rack	\$450	1	\$450
Plyo boxes (set 6", 12", 18", and 24")	\$1,100	1	\$1,100
Kettlebell set (8 kg, 12 kg, 16 kg, 20 kg, and 24 kg)	\$350	1	\$350
Battling ropes	\$180	2	\$360
Total			\$10,360
*Shipping and taxes			\$2,450
Installation			\$1,230
Grand total			\$14,040

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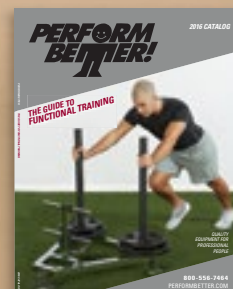
TABLE 2. SAMPLE SUPPLY NEEDS FOR A STUDIO OR SMALL GYM (3)

SUPPLIES	PRICE	QUANTITY	TOTAL
Vacuum cleaner	\$250	1	\$250
Computer and printer	\$1,500	1	\$1,500
Automated external defibrillator (AED) kit	\$1,000	1	\$1,000
First aid kit	\$150	1	\$150
Clocks, stereo, and speakers	\$350	1	\$350
Toilet paper and seat covers	\$45	1 case of each	\$90
Cleaning rags	\$85	1 case	\$85
Squeegee and window cleaner	\$15	1 of each	\$30
Dust pan and broom/mop	\$25	1	\$25
Trash cans and trash bags	\$35	3 (with refill bags for each)	\$105
Hand soap, shampoo, conditioner, and lotion	\$15	2 of each	\$120
Lamps and light bulbs	\$40	2 of each	\$80
Gym wipes	\$90	1 case	\$90
Water fountain (station)	\$1,100	1	\$1,100
Floor mats, fans, and extension cords	\$75	3 of each	\$225
Total			\$5,200
Shipping and taxes			\$380
Grand total			\$5,580

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PRINCIPLE-BASED PROGRAM DESIGN— A PRACTICAL, STEP-BY-STEP GUIDE

NICK TUMMINELLO, NSCA-CPT

It is often said that physical training is “both an art and a science.” However, because one cannot dissociate the art from its foundational science (i.e., training principles and best available evidence), programming is really “the art of applying the science.” Unfortunately, although most resources on program design review the foundational scientific principles of training, they often fail to provide practical strategies that strength and conditioning professionals need in order to apply these principles successfully when designing programs. To help bridge the gap between science and application, this article provides strength and conditioning professionals a simple and practical, step-by-step system for applying the scientific principles of training into the program design process.

TRAINING PRINCIPLES VS. TRAINING METHODS

Many strength and conditioning professionals claim that they base their programs on the foundational principles of training. But many of these same strength and conditioning professionals will look at a training program and judge it as “good” or “bad” simply based on whether it uses exercises or training methods that they have a bias towards. This method of judgment clearly demonstrates that they are putting training methods before training principles. It is important to understand that the word “foundational” denotes an underlying basis, principle, or fundamental aspect. When this definition is applied to programming, it becomes clear, contrary to popular belief, that there are no foundational exercises, just conventional and unconventional exercises and foundational training principles. It is the principles that dictate that the best exercises are included in a comprehensive training program. With that reality established, it becomes clear that a well-designed exercise program is not determined by whether or not it includes any particular types of exercises or training style; what determines a good program is how well it applies and adheres to the foundational principles of training, such as individuality, progressive overload, specificity, and variety. In other words, it is the training principles that determine the types of training methods that need to be utilized in the program, not the other way around. With this reality in mind, strength and conditioning professionals who have a better grasp of how to apply principles

will have a much greater understanding of exercise methods, and therefore, should be able to design more effective exercise programs.

WHAT PROGRAM DESIGN REALLY IS

Programming is really a process of decision-making. This article provides a system for making decisions based on principles when designing exercise programs. This decision-making process should be guided by the following series of questions:

1. What are the client's or athlete's training goals and what types of exercises and training methods need to be applied to achieve these goals?
2. Which of these types of exercises and training methods will the client or athlete be able to do/not able to do based on their ability and training environment?
3. How can overload be provided to these exercises and training methods to ensure progress?
4. How can these exercises and training methods be varied to continue to create a positive adaptation to the training program (i.e., training stimulus) without reaching the point of accommodation, where the client or athlete stops adapting positively?

It is obvious that the first question provides the prerequisite knowledge one needs to be able to answer the next. So, although each of these questions are individually important to answer in order to optimize program design, they are interdependent components that operate best when used in an order of hierarchy.

THE HIERARCHY OF TRAINING PRINCIPLES

Due to the fact that each of these successive questions correlate with a principle of training—question one with the principle of specificity, question two with the principle of individuality, question three with the principle of progressive overload, and question four with the principle of variation—these principles should be addressed and applied in this specific order of hierarchy:

1. Specificity
2. Individuality
3. Progressive overload
4. Variation

Due to the nature of how the previous principle in this order of succession provides one with the prerequisite knowledge needed to accurately apply the next principle in the sequence, this article proposes that the strength and conditioning professional cannot properly apply any of these principles without first knowing the information that comes from applying the previous principle in the hierarchy. Therefore, these principles should be viewed, not as generic training concepts, but as interrelated training components that are best applied in the order of hierarchy.

STEP 1: APPLY THE PRINCIPLE OF SPECIFICITY

The principle of specificity dictates that the adaptations to training will be specific to the demands the training puts on the body (6). Since the purpose of programming is to create the appropriate training stimulus to elicit specific adaptations, the first step in the programming process is to determine the desired training goals. This is because the training goals ultimately determine the types of exercises and methodologies that need to be part of the workout program.

Specificity in training can be accomplished by targeting muscle groups, energy systems, speed of movement, movement patterns, and/or muscle action types (4). For example, if a client's or athlete's goal is to become more explosive, the program should include explosive exercises (i.e., power exercises). If a client or athlete has a multifaceted goal, such as improving physique, performance, and overall health, then their program requires several training components because no single type of training will sufficiently address all of their demands (7).

STEP 2: APPLY THE PRINCIPLE OF INDIVIDUALITY

Once the strength and conditioning professional establishes the types of exercises and training methods that will elicit the desired adaptations, the next step is to apply the principle of individuality. This can be done by analyzing which of these exercises and methods will best fit the individual's ability and training environment.

With regards to the client's or athlete's ability, one of the most common training mistakes involves trying to fit the individual to the exercise instead of fitting the exercise to the individual. Some exercises just do not fit well with certain bodies. Each human being moves differently, based on size and shape, which is dictated by each individual's unique skeletal framework and body proportions. In addition, injury, loss of cartilage, and natural degenerative processes in joints (e.g., arthritis) can influence how individuals move. For these reasons, trying to fit every person into the same exercise movement is potentially dangerous. If doing so goes against an individual's movement capability, it could cause a new problem or exacerbate an existing one. Therefore, the strength and conditioning professional should carefully choose the particular exercises that best fit how each individual client or athlete moves.

With regards to training environment, once it is established which exercises best fit a client's or athlete's ability, the strength and conditioning professional should then determine which of these exercises best fit within the training environment available to the individual. This is because certain training environments (e.g., overly crowded, small, or home gyms) are not conducive to performing certain exercises due to equipment and space limitations.

STEP 3: APPLY THE PRINCIPLE OF PROGRESSIVE OVERLOAD

The principle of progressive overload refers to the systematic modification of a training program over time. In addition to exercise intensity, progressive overload also refers to frequency and increasing the difficulty of exercise selection (e.g., advancement from low-skill to high-skill exercises) (1). In applying the principle of progressive overload to using specific exercises, the strength and conditioning professional should look for improvements in volume, intensity, movement quality and efficiency, endurance, and recovery. The principle of specificity dictates that the overload method(s) chosen should be specific to the desired adaptation (6). For example, if a client or athlete is training to improve strength, they could gradually add heavier loads or perform more repetitions with the same load.

It is important to note that exercises should be progressed on an individual basis rather than a pre-determined schedule. The strength and conditioning professional should base their progressive overload on a client's or athlete's ability level and speed of adaptation. This highlights why the principle of progressive overload is best applied in the programming process after applying the principles of individuality and specificity.

STEP 4: APPLY VARIATION

The strength and conditioning professional's programming objective is to create a positive adaptation to the training program (i.e., training stimulus) without reaching the point of accommodation, where the client or athlete stops positively adapting or experiences a decrease in performance. Due to the adaptive properties of the human body, the principle of progressive overload will only take the client or athlete so far. Eventually the client or athlete will reach a plateau and be unable to keep progressively overloading the same exercise movements. This is why variation is important to consider after the principle of progressive overload.

Variation requires planned changes in exercise selection and training variables. This usually involves changing the exercises employed in the program and/or modifying the order of the exercises. As a general guideline, changing the program every 3 – 5 weeks may provide the body enough time to adapt. Improved neuromuscular coordination and increased muscle hypertrophy have been shown to occur in the early stages (the first 3 – 5 weeks) of a training program or when starting a new program (2,3,5). However, it usually is not long enough for the body to accommodate to the training stimulus when the program becomes stale and is much less or no longer beneficial.

It is important to note that when applied properly, variation does not conflict with the specificity and progressive overload principles. This is because any good, long-term training program should have enough consistency to allow for continued progress

and variety to prevent boredom, staleness, and potential repetitive stress injury. It is also important for the strength and conditioning professional to remember that a multitude of exercise variations exist not only to diversify a training program but also to provide variations to account for individualized movement patterns.

CONCLUSION

Properly applying the principles of specificity, individuality, progressive overload, and variation (in that order) is a proven method behind program design that all strength and conditioning professionals should follow. If strength and conditioning professionals use this simple, principle-based decision-making process as a general guideline, it can lead to the creation of fundamentally sound and well-rounded programs that help clients and athletes train at optimal levels.

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A close-up photograph of a person's torso and arms. They are wearing a dark grey t-shirt and holding a black weight plate with both hands. The weight plate has 'TECHNOGYM' and '10' embossed on it. The background is dark and out of focus.

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OMEGA-3 INTAKE— ITS IMPACT ON HEALTH AND MUSCLE

DAWN WEATHERWAX, RD, CSSD, ATC, CSCS

Omega-3 fatty acids have been shown to aid in eye, heart, brain, and joint health, but research is also indicating its impact on muscle (1,3,8,10).

WHAT ARE OMEGA-3 FATTY ACIDS?

Omega-3 fatty acids, a form of polyunsaturated fat, are essential for healthy diets. Omega-3s are vital for health and impact many functions within the body, such as building cell membranes and decreasing inflammation (7,12). While inflammation is a standard part of the body's immune response, studies show that it can prompt a multitude of severe conditions, including arthritis, cardiovascular diseases, various type of cancers, and autoimmune diseases (7,12,18). The other form of polyunsaturated fat are known as omega-6 fatty acids. Omega-6s have positive roles in the body; however, omega-6s tend to promote inflammation (7). The ratio of omega-6:omega-3 should be around 2:1 but most Americans consume 10 – 25:1 due to the abundance of refined vegetable oils (e.g., corn, safflower, sunflower, and soy) (4,14,22).

FISH-BASED OMEGA-3S VERSUS OTHER OMEGA-3 SOURCES

There are three essential types of omega-3 fatty acids that come from foods. These are alpha-linolenic acids (ALAs), eicosapentaenoic acids (EPAs), and docosahexaenoic acids (DHAs). Once ALAs are consumed, the body converts them into EPAs and DHAs, the two kinds of omega-3s that can be utilized easily and used by the body. However, only about 5 – 10% of ALA can be converted into these functional forms (6). Good sources of ALAs include flax oil, flaxseeds, chia seeds, nut oil,

soybeans, kale, spinach, and grass-fed dairy and meats. The most abundant sources of EPAs and DHAs are typically fish and fish oil supplements.

BALANCING OMEGA-6S AND OMEGA-3S

Since most people consume more omega-6s than omega-3s, one approach to restoring the equilibrium of omega fatty acid levels is to decrease the intake of omega-6s and increase the intake of good sources of omega-3 fats. Here are some suggestions to accomplish this:

1. Replace oils like soy, corn, and safflower with flax oil, olive oil, or canola oil
2. Eat meats and eggs that are from grass-fed sources
3. Add chia and flax seeds to shakes, smoothies, baked goods, and salads
4. Eat wild caught fish over farmed fish

HOW DO EPA AND DHA AFFECT ATHLETIC PERFORMANCE?

There are several ways in which EPA and DHA can affect athletic performance, including muscle growth, muscle soreness and inflammation, and decelerating muscle loss.

MUSCLE GROWTH

Besides the importance of exercise and nutrition, fish oils may play an important role in muscle growth. Research has indicated that

omega-3s, in conjunction with an anabolic stimulus, can enhance insulin sensitive aspects of protein metabolism (9,11,15). This may lead to an increase in protein synthesis and muscle size.

REDUCE MUSCLE SORENESS AND INFLAMMATION

Omega-3s have also been shown to increase blood flow to muscles throughout exercise, diminish muscle soreness, lower inflammation, and enhance range of motion after training (10,16,19). Increased levels of inflammation negatively impact insulin sensitivity and metabolic benefits. If inflammation lingers too long, it can harmfully impact tissue repair and recovery (2,19,21).

DECELERATE MUSCLE LOSS

During extended periods of rest, omega-3s may decrease the rate of muscle and bone loss. This is very important for individuals who have major injuries that require long-term recoveries (5,16).

PROPOSED DAILY INTAKE OF OMEGA-3S

- The United States Food and Drug Administration recommends an intake up to 3 g of omega-3s per day as safe (17).
- The American Heart Association suggests eating fish that are high in omega-3s twice a week (12). Additionally, they recommend consuming about 0.5 g per day for people without coronary heart disease, 1 g per day for people who have coronary heart disease, and 2.4 g per day for those who need to improve blood lipid levels (e.g., triglycerides, cholesterol, high-density lipoprotein, and low-density lipoprotein) (12).
- It is recommended to avoid dosages over 3 g a day due to possible thinning of the blood. It is best to seek out a qualified medical professional's advice if considering taking more than the recommended dosage.
- For anyone using cholesterol lowering medicine, nonsteroidal anti-inflammatory drugs (NSAIDs), blood sugar lowering medications, or blood thinning medications, medical advice should be sought out prior to supplementation.

CONCLUSION

Omega-3 fatty acids are essential for a healthy nutritional regimen. The balance between omega-3s and omega-6s are critical for optimal health. Most individuals consume too much omega-6s and too little omega-3s. Omega-3 fatty acids not only have positive impacts on the eyes, heart, brain, and joints, but also on muscle tissue. Omega-3 is a very important nutrient that can help an individual achieve optimal health and performance.

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TABLE 1. POTENTIAL SIGNS OF OMEGA-3 DEFICIENCY

SIGNS OF OMEGA-3 DEFICIENCY
Bumps on the back of arms
Cracking and peeling fingertips
Dry eyes, mouth, and skin
Excessive thirst
Flaky scalp
Slow-growing or dull fingernails
Stiff or painful joints
Yearn for fatty foods

TABLE 2. TOP 5 SUGGESTED OMEGA-3 FATTY ACID FOODS

FOOD SOURCE	AMOUNT OF OMEGA-3S (IN MG PER 3-OZ SERVING)
Sardines	1,950
Salmon (wild)	1,060
Tuna, albacore (canned)	900
Mussel	700
Rainbow trout	630



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THE EXPERIENCE IS JUST AS IMPORTANT AS THE RESULTS—BUILDING A SUCCESSFUL FITNESS BUSINESS BEYOND EXERCISE

DAVID CRUMP

Personal trainers are often measured by the results that they produce. Most of the time this means pounds lost or pounds added (to lifts). However, that pales in comparison to the most important metric—lives changed. None of these outcomes are possible without consistency from the client and the trainer. And what drives consistency? A great experience for each client from the moment they walk in the door until the moment they leave.

While creating a great experience may sound fairly intuitive, it is easy to miss the mark as a coach or trainer. This is often due to a heavy focus on exercises and programming with little or no attention given to other aspects of a pleasurable gym experience such as club culture and coaching centered on the person instead of the exercise. Personal trainers are not just in the business of fitness, but customer service as well. By implementing these strategies, personal trainers, training facility owners, and coaches can increase their impact and improve their bottom line.

CREATE A COMMUNITY

In the book *"Pour Your Heart Into It: How Starbucks Built a Company One Cup at a Time,"* Howard Schultz talks about the desire to have his coffee shops become his customer's "third place" (2). With someone's "first place" being their home and their "second place" being their work, the "third place" is the one that offers a reprieve from the other two, and is a place where social connection is built. Common characteristics of these types of

places include regular attendees, a sense of commonality, and a welcoming and comfortable atmosphere. Personal trainers or facility owners should strive to make their gym or environment a "third place."

When accomplished, it is often referred to as "club culture" and can be very beneficial for a successful business. Once the club culture is established, clients will form new friendships, create a support system for each other, and desire to refer new clients to the facility. However, this will not happen on its own, and personal trainers and owners must lead the way. This can be done by introducing clients to each other, organizing group activities outside of the gym, and keeping the mood of the gym light and fun, but still focused. Personal trainers and owners will know that they have nailed it when clients are consistently staying longer than their sessions and high fives are as common as personal records.

COACH THE CLIENT, NOT THE EXERCISE

Clients are more than workouts on a clipboard or whiteboard—they are people who are in constant flux and have a unique set of responsibilities, complex emotions, and needs. This means that trainers and coaches have to dig deep to find out more about their clients in order to coach them efficiently. What are their family and support systems like? How stressful are their jobs? What motivates them? What communication style seems to elicit the best response from them? Finding the answers to questions like these can build trust and create buy-in to the program.

Training sessions should be customized to the client’s physical and emotional state each day. Trainers and coaches cannot always anticipate how someone will show up to their training session. Some days they may show up excited, well rested, and ready to conquer the world, while other days they may appear tired, stressed, or on the verge of tears. Personal trainers should consider how the planned workout will make the client feel. The personal trainer can choose to push them through the sets of heavy deadlifts that were scheduled or shift gears and bring them to a better emotional place with a workout of lower intensity. If the saying “people won’t remember what you did, but they’ll remember how you made them feel” holds true, then it would appear that the latter is the best choice for delivering a lasting positive experience.

CONSISTENCY IS KEY

While it is clear that clients want a great experience, that is not all they want. In fact, according to Michael Gerber in “*The E-Myth Revisited*,” what they want even more is for that experience to be consistent (1). When it comes to trading their hard-earned dollars for a product or service, people would rather bet on a sure thing than try something new each time. A perfect illustration of this point is getting a haircut. Most people go to the same hair stylist for years because they know that not only can they count on the same pleasant conversation, but they can be assured that they will receive the same cut each and every time.

As a business, the only way to ensure consistency in your service is to have systems and procedures in place that take the guesswork out of day-to-day operations. This can be done by taking all the typical daily tasks performed as a trainer or coach, such as handling phone calls from potential new clients or taking someone through their first workout, and dividing them into individual steps

that you could to teach to someone if necessary. This is especially helpful for facility owners or personal trainers managing their own gyms. When you have these processes solidified and written down into a manual, it will be much easier to train staff in making sure that customers get the same experience regardless of who is assisting them.

CONCLUSION

To build a successful business and reputation, personal trainers must do more than get their clients physical results; they must also create a positive experience. That experience must be inviting, engaging, and consistent if personal trainers want to make a real impact on their community and bottom line.

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ABOUT THE AUTHOR

David Crump has been a personal trainer for nearly a decade. He holds a handful of certifications and has been fortunate to learn from some of the best in the field. After leaving a successful career in corporate fitness, Crump started in his own company and opened his own training studio, Spark Fitness. In addition to helping his clients achieve their goals, he also mentors new trainers and contributes to many websites and publications with the intention of improving the perception of the fitness industry.

TABLE 1. CHECKLIST FOR DELIVERING A GREAT EXPERIENCE

COMMUNITY	COACHING	CONSISTENCY
Keep facility clean	Work to understand clients’ work/life balance	Understand that “winging it” will not bring success
Treat everyone with respect and keep the mood light, but focused	Communicate with clients in the manner that they prefer and understand their expectations	Have written systems and procedures that detail how to handle phone calls from potential clients, new client orientations, and assessments
Introduce clients to each other; especially if they have common interests	Take the time to understand the underlying motivation of clients to help them reach their goals	Use forms that outline policies, membership/training agreements, and expectations of clients
Organize group activities outside the gym at least once a month and encourage clients to bring family	Evaluate clients’ physical and emotional state each session and adjust accordingly	Understand that your business may need to hire employees someday so it is important to create a manual now so you will be able to train them effectively
Always create a positive and uplifting atmosphere		



THE PREVALENCE OF MUSCLE DYSMORPHIA IN ADOLESCENTS AND WHAT TO LOOK FOR

NICK MARUCA, CSCS

Most kids look up to superheroes and want to be just like them. At such a young age, they are not yet able to build massive chests or arms, or have perfect six-pack abs. However, for many, that image was always in the back of their minds. Boys, in particular, are expected to be tough, big, and strong as they get older and those who do not seem to develop those traits can fall behind. Sometimes the children who are not the biggest or strongest will develop an obsession with physical size. This may be a way to overcome the feelings of insecurity they have about their bodies or perhaps as a reaction to any bullying that they encountered.

During adolescence, children become more aware of their bodies and the way society perceives them. Beginning resistance training at a young age, or any age for that matter, can do wonders for the human body when it is practiced in a healthy and safe manner. The first time someone begins to see strength increase and muscles develop there may be a genuine feeling of accomplishment and a boost of self-efficacy. However, as adolescents continue to get bigger and stronger, sometimes that confidence transforms itself into insecurity. Boys, in particular, may begin to compare themselves to their peers and feel like they are too small or weak. This article aims to discuss what muscle dysmorphia is, the ways in which adolescents can fall victim to it, and how to intervene when body image becomes distorted.

WHAT STRENGTH AND CONDITIONING PROFESSIONALS NEED TO KNOW: WHAT IS MUSCLE DYSMORPHIA?

Muscle dysmorphia (MD), also known as bigorexia nervosa or “reverse anorexia,” is a psychological condition characterized by an extreme pursuit of muscularity and leanness (14,15,19). It is a subcategory of body dysmorphic disorders (BDD), which deal with preoccupations of areas of the body as a whole (13). Muscle dysmorphia is not gender specific, but it is more prevalent in males than females (13,16,17). Athletes who participate in power-oriented sports such as football, wrestling, or weightlifting are more susceptible to developing MD due to the constant pressure to get stronger and more muscular (2,4,5,6,16,19). The prevalence of muscle dysmorphia is not limited to the realm of athletics, as it can be seen in the general population as well. Although the data is not conclusive, it is estimated that as many as 100,000 people or more meet the criteria for MD, and there is a growing influence on the youth in society to achieve a muscular physique, with reports of symptoms of MD beginning as early as the middle teenage years (5,13,15).

SOCIETAL INFLUENCES AND THE CAUSES OF MUSCLE DYSMORPHIA

Every day, people are constantly bombarded with messages about what defines the perfect body. For many years, those images were mainly directed towards females, pressuring them to become thinner and more toned, which can lead to an increase in disorders such as anorexia and bulimia. Recently, more focus has been placed on what the male body should look like. Although

there is a shortage of research on body image disorders in men, some studies have shown that society prefers mesomorphic (i.e., muscular) body types in a male compared to those who have more endomorphic (i.e., heavy or round) or ectomorphic (i.e., slender and lacking in muscle) bodies (19,20). Many action figures, movies, and magazines that target adolescent males, such as *Sports Illustrated* and *Rolling Stone*, showcase images of overly muscular males with physiques that are naturally unattainable for most boys, yet have become the ideal male body image (2,5,6,13,17,19).

In a study by Pope et al., adolescent boys were asked a series of questions related to body image. The results showed that the boys had a desire for their own bodies to be considerably larger than their current physical status and that they perceived their own bodies to be considerably thinner than they really were (13,17). Even at young ages, boys are exposed to images in the media of how they should look. During the fragile developmental years of adolescence, peer-pressure and self-consciousness about one's body is a common occurrence (5,7,8,9,19). Not every body type is designed for high levels of muscularity. If a boy is surrounded by peers who are bigger and stronger than they are, there may be a longing to fit in, especially when factoring in the negative connotations associated with ectomorphic body types in males (3,4,19). Becoming bigger, faster, and stronger can sometimes be a lifelong pursuit for males. Peer-pressure and media influence can be major contributors to these goals and cause what should be a healthy, positive endeavor to transform into potentially risky and unhealthy practices.

WHAT TO WATCH FOR: WARNING SIGNS OF MUSCLE DYSMORPHIA

Strength and conditioning professionals spend a great deal of time with the athletes and clients. Although there are few high schools in the country with designated strength and conditioning coaches, athletes will still gravitate towards coaches who have the greatest influence on them (19). Because of this, it is important to recognize when an athlete or client begins to exhibit signs that may coincide with muscle dysmorphia.

The desire to become lean and muscular can become obsessive in individuals with MD, which may lead to depression and anxiety over not being as big or muscular as they desire. Those with MD may be so preoccupied with their exercise and diet regimens that life outside of those walls may seem less important or even non-existent (8,14). People with MD may spend countless hours focusing on their training and diet regimens, and when those guidelines are not being adhered to as much as desired, guilt and anxiety may set in (5,14). Social interactions, work, and family functions may be ignored in favor of their exercise and diet programs, which can affect the individual's employment and relationship status. These individuals may also be afraid to reveal their bodies to others, wear large articles of clothing to keep themselves concealed, frequently check their physiques in mirrors, or constantly seek compliments from others (2,5,14,17). Additionally, these individuals are often much larger and more muscular than they believe themselves to be. Strength and conditioning professionals should always be on the lookout for common signs of MD. It is important for strength and conditioning professionals to talk to the athletes and discover if there are any feelings of depression or anxiety, and to listen for remarks about inadequacies with their size on a consistent basis (14).

Muscle dysmorphia is sometimes classified as an eating disorder, since individuals with MD may obsess over diet, and typically eat excessively unhealthy amounts in order to gain weight and muscle size. They may experience similar feelings of depression and body dissatisfaction as individuals with eating disorders (2,5,13). There is also the danger of individuals with MD using performance-enhancing supplements, such as anabolic steroids, prohormones, and ephedrine, to achieve their desired level of muscularity, which may never be completely satisfied (2,5,13,14). At its root, muscle dysmorphia is a psychological distortion. When a person intends to increase muscularity to extreme levels beyond general health and fitness, it might place them into the criteria for MD (14).

In a 2006 study conducted by Cafri et al., from their sample size of 269 adolescent males, they found unsettling rates of 2.6%, 4.5%, and 6% for the potential lifetime uses of steroids, prohormones, and ephedrine, respectively (5). They also found that the total overall percentage of using these drugs at some point during their lifetime was 9.8% (5). The likelihood of steroid use also increases for individuals with lower levels of self-esteem and for those who participate in power-oriented sports (5,10,12). If these numbers were extrapolated to represent the entire United States population of boys ages 15 – 19, it would put the number of males who have used these drugs at over 1 million (5).

It is important to also note that Cafri et al. states that the use of these drugs is mostly experimental. The more adolescents that experiment with these drugs, the higher the chances will be that they become long-term users and possibly acquire the health risks associated with the use of the drug. Although the sample size in this study may be small, it is important to realize that many of today's youth are at risk of developing body dissatisfaction issues due to a variety of outside influences. It is important for strength and conditioning professionals to recognize the signs and symptoms of MD so that they can refer them to a qualified professional to get appropriate treatment and care.

One of the hardest aspects about addressing MD is that the individual may not appear to be unhealthy physically, but they may be suffering from psychological damage that can go unnoticed for a long time (5,8,9,19). Another issue is that many people who are afflicted with MD do not believe that they need help (5,13,19). Males do not typically address their feelings or seek treatment, so it is recommended to approach this issue in a calm and genuine manner in order to break down those barriers (1,2,13,19). Strength and conditioning professionals spend large amounts of time with their athletes and clients, so there is a great deal of respect and trust between the two, allowing the potential for better opportunities of intervention (1,19). When it comes down to it, simply having someone there to listen and care about them can be the turning point for the athlete to seek help. It is worth noting that it is beyond the scope of practice for strength and conditioning professionals to diagnose or treat psychological conditions such as MD. If a strength and conditioning professional notices possible signs of MD, they should refer to an appropriate healthcare professional.

THE PREVALENCE OF MUSCLE DYSMORPHIA IN ADOLESCENTS AND WHAT TO LOOK FOR

CONCLUSION

Most individuals idolize other people or characters for their physical appearance. These idolized people can be very beneficial because they can help in establishing goals and aspirations to become healthier and more physically fit. The desire to improve is sometimes a never-ending pursuit to be the absolute best, but if overdone, it can come at a cost. When an individual begins to sacrifice other areas of their life in the pursuit of perfection, it can develop into something that is unhealthy. Strength and conditioning professionals need to be on the lookout for signs and symptoms of MD. It is also important to be careful not to overemphasize the need for excessive muscularity among adolescents. Adolescents are emotionally fragile and can be very susceptible to the voices that surround them, so strength and conditioning professionals should strive to be a positive voice, and the voice that speaks the loudest.

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ABOUT THE AUTHOR

Nick Maruca earned his Bachelor of Science degree in Kinesiology from Temple University in 2014 and is a Certified Strength and Conditioning Specialist® (CSCS®). He specializes in strength and conditioning for youth athletes, and has worked with some of New Jersey's best trainers and strength coaches. He has a passion for working with youth and people with disabilities, as he overcame his cerebral palsy with the help of sports and fitness. Maruca is a Certified Inclusive Fitness Trainer through the American College of Sports Medicine (ACSM-CIFT). He strives to not only create physically strong people through his training, but also lasting relationships that exceed beyond the weight room. Maruca is currently a personal trainer and performance coach at the New Jersey Athletic Club in Lawrenceville, NJ. He has 10 years of experience as a strength coach, starting at the age of 15, and has worked with athletes of all ages and skill levels, from youth to professional levels.



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THE TRAINING TRAP—BUILDING FINANCIAL FREEDOM IN AN APPOINTMENT-BASED CAREER

JOE DRAKE, MS, HKC, NSCA-CPT, USAW

THE PROBLEM

In a rapidly expanding health and fitness industry, certified personal trainers are on the rise. From performance, to general health and longevity, interest in personal trainers has skyrocketed. Personal training presents an enticing career path for those looking for the possibility of personal fulfillment and financial opportunity. Why then does the fitness industry have such a high rate of turnover and burnout amongst personal trainers? The answer is that for most people, an appointment-based career of “training sessions” is not a sustainable career path.

The life of a personal trainer can be great, but trading time for money inherently limits income possibilities with only 24 hours in any given day. Furthermore, only so many of those hours are even available to work with clients. In an effort to make more money in that limited time, personal trainers are often forced to sacrifice personal priorities, service quality, and relationships. This can sometimes lead to frustration, burnout, and ultimately, career changes.

The average personal training income in the United States is thought to be between \$35,000 – \$45,000 per year (1). These numbers seem great for passionate personal trainers starting out, but what about years down the road? Those who want to support a family, retire at a decent age, or create freedom in their career must take steps to rise above these industry averages. This income may also be highly variable based upon:

- The region of the United States in which the personal trainer works

- Part-time or full-time training status
- Studio or club environment
- Employee or independent contractor status

Corporate fitness facilities may provide benefits and retirement to their employees; however, less than 40% of full-time personal trainers reported having health insurance benefits and only 17% claim to receive retirement from their current employers (1). What about those working for themselves as independent contractors? A busy independent contractor may have 30 sessions a week at \$50 per session, which would translate into a weekly income of \$1,500. In a perfect world, this would equate to a yearly salary of \$75,000. However, this number does not include vacation days, sick days, cancelled client sessions, health insurance, taxes, or other expenses incurred from working alone.

THE SOLUTION

Put simply, the solution to this problem is to become more than a regular personal trainer. Regardless of whether a personal trainer is a business owner or not, long-term success warrants acting like a business owner. Businesses must profit to stay alive. Many personal trainers can easily get caught up in their passion for changing bodies and lives and forget the business side of the profession. Yet, in order to perform the job on a consistent basis, the business must be sustainable financially. Taking a big-picture business approach may allow personal trainers to affect more lives throughout a long successful career.

This sounds great but how do you go about putting it into action? The following are a few ways to get a personal trainer started on building a more sustainable career as a personal trainer while also delivering more value to the clients in the process.

DEVELOPING MULTIPLE REVENUE STREAMS

The first priority is to become great at the main source of income—training clients. In the meantime, it does not hurt to plan for growth. Deciding which direction to go requires finding something that either integrates well into the current training and clientele or has the ability to bring new business. Some options include:

- Corporate fitness and wellness accounts
- Extract more value from current clients
 - » Supplement sales
 - » Equipment product sales
 - » T-shirts and apparel
- Challenges and transformation programs
 - » Keep long-term clients continually engaged and low barrier entry for new clients

LEVERAGING TIME

Time is one of the personal trainer's most valuable resources. Time to train clients each day is limited, so utilizing time wisely is paramount. How can a personal trainer reach more people and affect more lives in the limited amount of time that they are given?

- Build a team
 - » Multiply efforts by hiring and developing other personal trainers
- Explore small group training
 - » Impact more people at one time and increase profits per hour
- Online opportunities
 - » Online training clients and programs
 - » Develop content and resources others find valuable

KNOWING THE VALUE OF A PERSONAL TRAINER'S SERVICES

Personal trainers should be honest about the relationship that exists between the value they offer and their pricing. Many personal trainers may undercharge clients to gain clientele but struggle to increase those rates appropriately as they grow. Personal trainers who work as employees may not be able to directly dictate pricing, but can continually work hard to grow enough professionally to become invaluable to their clientele. Setting and changing rates can be challenging; when doing so personal trainers should keep the following in mind:

- Value = perception
 - » Money has no true inherent value. Value lies in client perception of the services offered.

- Compare to other personal training services
 - » Research rates in the area and decide where in the continuum of pricing you want to exist based upon desired clientele and value offered.
- The rules of supply and demand apply to training
 - » The busier a personal trainer is, the more they can justify charging clients for each session. There is no need to gouge clients financially, but when a personal trainer gets to a point where they are not in need of new clients, then they should not hesitate to increase rates for incoming clients. For instance, clients are unlikely to blink an eye at increased rates of 5 – 10% but that extra \$10 per session could translate into an additional \$10,000 of income over the next year.
 - » If a personal trainer is thinking about increasing rates for current or long-time clientele, they should give them a specific timeframe in which it will happen and continue to deliver in every session. As long as the personal trainer communicates to them well ahead of time, the clients who truly believe in the value of the services will likely stay on board and continue.

CONCLUSION

The career path of a personal trainer inherently presents a certain amount of instability and unpredictability, but this does not have to last. There is no reason that personal trainers cannot make great money, afford health insurance, save for retirement, and create more freedom in their lives. This may not be the current norm in the personal training industry, but applying some of the aforementioned principles can help to build a successful and fulfilling career. Personal trainers should work to become versatile by developing multiple revenue streams. They should leverage their time so that making more money does not equate to working more hours. Finally, personal trainers should put thought and energy into understanding the value that they offer their clients. For example, a personal trainer cannot prevent occurrences such as having five clients cancel their sessions in the same week. However, with an appropriate long-term plan in place, a personal trainer can lessen the negative impact that such events can have and allow them to continue changing lives for years to come.

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