New Horizon Fitness

Top 12 Exercise Mistakes

You really get to know your fellow gym rats after 18 years at the same fitness facility. As such, I can't help but notice a whole lot of less than optimal routines and techniques being used. It took me awhile to just pare this list down to 12. Sure, just being in the gym is a good thing compared to being a couch potato. However, if you want maximum results in minimum time, there are well proven means to get there. A lot of mistakes involve weight or resistance training which is often neglected. That is a big mistake in itself. Throughout this paper I bolded some principles and concepts that are "need to know." At the end are several free and inexpensive references for improving your workout.

TOP 12 EXERCISE MISTAKES:

1. Only doing steady state aerobic training. There is no problem with constantly exercising at a steady, moderate to vigorous pace except for the principle known as **Specific Adaptation to Imposed Demand (SAID).** In short, our bodies will adapt to a specific workload over time and then level out and not improve further. I see a lot of people on the same treadmill or elliptical trainer, exercising at the same pace, day after day. Instead of reaching an ideal weight, their body adapts to carrying a lot of excess fat at the given intensity of exercise. Besides carrying too much weight, they reach aerobic fitness plateaus as well. The way to reach new heights of fitness is to alternate **High Intensity Interval Training (HIIT)** with steady state aerobic training. HIIT is done in less time and shocks your body into making additional gains. See references at end for a HIIT guide.

2. Running into injuries and failure to cross train. There are a few genetically gifted people who can run great distances their whole life. However, for many this high impact exercise will lead to multiple joint problems. Running 45 minutes versus 30 minutes improves cardiovascular capacity just another 2% while raising orthopedic injuries 30%. The running "high" convinces many to continue despite their pain. Problems compound and instead of just losing the ability to run, the die-hards often find difficulty in just walking. I've seen too many highly active runners becomes sedate bystanders overnight. Unless you are part of the small gifted group, running should be mixed more and more with cross training as injuries, pain and/or your age dictate. Mortality is greatly reduced for every year you can continue moderate to brisk walking. Don't sacrifice this future life saver by running too much or too exclusively when you are younger.

3. Doing aerobic exercise only. Grinding away on an elliptical trainer for 1/2 hour or more certainly beats lying on the couch, but it only amounts to half the workout you need. Aerobic exercise primarily trains lower body muscles and the cardiovascular system. It is not sufficient for total health. After age 35, you will lose 5-10% of your muscle mass each decade due to the natural wasting process of sarcopenia. Less muscle leads to frailty, injuries and a lower metabolism that contributes to obesity. Weight or **Resistance Training (RT)** is the only way to slow this process. Effective RT is high intensity, anaerobic exercise that creates micro-tears in muscle fibers. Your body adapts to RT by building stronger and bigger muscle fibers. Until you are extremely advanced in age, frailty is more a function of disuse than physiological constraints. The Surgeon General, American Medical Association, and American College of Sports Medicine (ACSM) now recommend RT two times a week in addition to aerobic exercise.

4. Doing RT using the wrong amount of weight, repetitions, sets, etc. The science of RT has been studied for years and is well established. Depending on the person's goals and stage of development; the best results come from specific combinations of resistance, repetitions (reps), sets, frequency, timing and recovery. Know (find out) what is right for you or you could be wasting time, risking injury

and getting little results. In GENERAL, beginning weight lifters should take it relatively easy for the first two months, single sets, 12-20 reps, <70% of **1 Repetition Maximum (1 RM)** for that exercise, 2-3 times a week. Continuing gains require greater intensity, 8-12 reps, 70-80% of 1RM, and perhaps multiple sets and split routines depending upon their goals. To maximize sport specific, endurance or body building gains, different combinations are used. Rep timing is important, 2 seconds to contract, 3-4 seconds to lengthen (eccentric). See references at end.

5. Failing to reach (near) failure while doing resistance training. In RT, failure is the point where you no longer move the resistance or weight another repetition. Unless you are a beginning weight lifter, see #4, moving "feather" light resistance relative to what you could be lifting is a waste of time. Experienced lifters need to add resistance so they reach near failure in the range of 8-12 repetitions. For some specialized objectives you need to increase resistance so you reach failure in just 3-4 reps. While keeping good form, it is the final 1-2 reps leading to near failure (or great fatigue) that recruit the most muscle fibers. Until a muscle fiber is recruited, it cannot be torn down in order to be built back up, the **overload principle.** Light resistance lets too many muscle fibers remain "on the shelf." the **all or nothing principle**. You may increase muscle endurance with light resistance and LOTS of reps, but you will not see strength gains and muscle growth.

6. Allowing quick returns of the weight after contraction or de-emphasizing the eccentric. It might seem contacting a muscle against resistance is the best way to build it up. However, it is during the lengthening or eccentric phase that the most benefit is obtained. Eccentric emphasis/only training is a muscle building technique body builders have employed for years. When first emphasizing eccentric training, be cautious with the amount of resistance. Eccentric training is more likely to cause delayed onset muscle soreness - that aching pain that sets in a day later. In GENERAL, the ideal timing for most resistance training is to take about two seconds to contract the muscle through its range, pause, and then three-four seconds to return (eccentric). Most people quickly drop the weight after contraction and lose more than half of the benefit.

7. Using less than a full range of motion. For example, a pull-up starts with the arms straight and ends with the chin above bar height, **as seen below**. I've seen too many pull-ups (and push-ups) where the person barely dips an inch from the top position. No, no and no! You are better off using an assisted pull-up machine until you can do the exercise properly. With few exceptions, every RT exercise should cover the full range of motion. The SAID principle will limit strength gains to the range of movement utilized. Overall gains will be limited since you will not be recruiting all the muscle fibers for the entire muscle group. Most often, people "cheat" the range of motion because they are using too much resistance. It may help your ego to say "I leg pressed 500 lbs today," except moving the weight two inches does not help much. Get real, crank down the resistance until you can do the exercise using the whole range of motion, proper form and correct time, 2/4 seconds, contract/return (eccentric).

8. Doing Behind-the-neck lat pull-downs. For reasons unknown, some people continue to perform seated, wide grip lat pull-downs ending with the bar behind the neck instead of touching the chest. **WRONG.** This type of movement limits the range of motion which would be reason enough to discontinue. The motion with the degree of external shoulder rotation destabilizes the shoulder joint and can damage rotator cuff ligaments. The forward jerking move needed to get the bar behind the neck contributes to intervertebral disk injuries. My theory is some novice somewhere did this the wrong way and it has been monkey see, monkey do, ever since. There is no reason to do behind the neck pull-downs unless you want to get fewer results and more injuries.

Overview:

Top 12 Exercise Mistakes

9. Doing the same RT exercise, day after day, after day. The SAID principle applies to RT as well as aerobic exercise. If you have been doing the same routine for three months, you will be hard pressed to make any more gains. All RT programs need to be modified over time, a process called **periodization**. Initially developed years ago by Soviet bloc Olympic coaches, it is now the standard for body builders and strength and power orientated professional athletes. Periodization uses progressive increases in reps or resistance in defined time cycles, broken by rest or lower volume cycles, followed by a new cycle at a higher level of intensity. A year or the time period leading up to a major event is a macrocycle. A macrocycle is broken down into several mesocycles of 3-4 weeks. These in turn are broken down into microcycles of 3-10 days. There is a planned progression from the microcycles to the mesocycle(s) to the completion of the macrocycle. Upon completion of a macrocycle you should have reached a new peak from which you chart a new macrocycle and sub units.

10. Neglecting post exercise nutrition. Whether it is vigorous RT or aerobic exercise, immediately after exercise your body tries to replace glycogen stores and rebuild muscle fiber. It is desperately seeking the glucose (carbohydrates) and amino acids (protein) to recover. If you don't ingest what you need, your body will continue to catabolize these substances from within - including other muscles. Studies show that the first half hour post exercise is critical. Immediately after an intense work out of any type, you should be slurping down a recovery drink or equivalent food full of high glycemic carbs and protein in a 3:1 to 4:1 ratio. Based upon ACSM guidelines and recent studies this would be 50-75 g of carbs and 12-19 g of protein. Sports recovery drinks in a 4:1 glucose/protein ratio have been designed for this purpose. A cheaper and natural alternative is 17-23 fluid ounces of low fat chocolate milk; check the nutrient breakdown on the label. A liquid drink gets the nutrients started in that 30 minute window; follow up ASAP with a well rounded meal.

11. Buying into a new super duper work out system. There is no shortage of exercise "experts" who have come up new techniques to help you build muscle. Yet the correct way to build strength and muscle mass has been established for years. Most of the "new" super muscles building techniques are often nothing more than old concepts, repackaged and renamed. Some very fine RT refinements are being researched and developed; these are published in professional peer reviewed publications like The Journal of Applied Physiology, Medicine and Science in Sports and Exercise (ACSM) or the Journal of the National Strength and Conditioning Association (NSCA). If your exercise "expert" does not have a degree in kinesiology, exercise physiology, exercise science (or related degree) or an ACSM, NSCA, ACE, or a Cooper Institute certification, more than likely they don't know what they are talking about. Muscle size and expertise do not always equate. Many people have a predominance of muscle fiber (Type ll) that quickly responds to RT exercise. They can put on muscle just by walking by a weight stack. It is also easier to gain muscle mass when you are younger and male, testosterone rules. However, a sample size of one does not mean what worked for the "expert" will work for you. In actuality, any new combination of RT will provide some results because of the periodization principle. But don't pay too much for recycled goods, get a good book and design your own workout.

12. Buying into a super duper muscle gaining supplement. Most body building and other performance enhancing supplements are a triumph of marketing over science. Marketers take a little scientific truth, mix in a bunch of terms few laymen understand, and show before and after pictures. Tie it all up with everyone's hope for an extra edge and it is not hard to greatly overcharge the general public. Most of the health & exercise mags are nothing but a catalog of overpriced, overhyped supplements. The science is solid behind some supplements such as

creatine, whey protein and even caffeine (energy & enhanced glucose uptake). The evidence indicates other supplements such as glutamine and arginine MAY be useful. Boosting testosterone with legal OTC or illegal anabolic substances can help, however many just don't work and you run the risk of hepatoxicity - liver damage. Vigorous exercise is the best way to naturally boost testosterone and Human Growth Hormone.

SUMMARY:

Knowledge = Effectiveness = Exercise Results. You need a basic understanding of the principles/techniques such as SAID, HIIT, periodization, overload, muscle fiber recruitment (all or nothing) and concentric/eccentric contractions. Too many people are just winging it in the gym. If I had to choose just one book that is a good beginning to intermediate guide, it is Neporent's Weight Lifting for Dummies. I'm not usually a big fan of "Dummies" books, but this one that is written IAW all current ACSM guidelines. Advanced weight lifters can benefit from anything written by exercise gurus Kraemer and Fleck, Optimizing Strength Training, Designing Nonlinear Periodization Workouts is a great guide to advanced periodization techniques. Both books are available at my Amazon store under the PRODUCTS link.

This article and the many other useful free and inexpensive references can be found at **newhorizonfitness.com.** Just go to the **LIBRARY > EXERCISE**. If several of these 12 mistakes are part of your routine or the highlighted principles seem foreign, you really need to do some homework or hire a personal trainer. I'm always happy to provide a certain amount of free advice in person and I offer a free one-half consultation, see **SERVICES** at my website. Email questions to me at info@newhorizonfitness.com

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