

**Exercises to  
Make Your  
Testosterone  
SURGE**

# **Exercises You Can Do Everyday to Reduce Estrogen and Make Your Testosterone Surge!**

by David Blyweiss, M.D.

Copyright © 2009 by UniScience Group® Inc.

All rights reserved. No part of this publication may be reproduced or transmitted in any form.

This book is intended to give general information, not personal, one-on-one medical advice. No action should be taken based solely on the contents of this book. Instead, readers who fail to consult with appropriate health authorities assume the risk of any injuries.

## **ARE YOU A VICTIM OF ESTROGEN DOMINANCE?**

Remember when you felt like you could conquer the world? Your body was toned and maybe even muscular. You felt energetic, strong and virile. But then you turned 40—and things changed.

It's a fact that, as a man approaches his 40s, his testosterone levels decline. Worse yet, the testosterone circulating through a man's body can be converted into the female hormone estrogen—a process known as aromatization. The resulting hormonal imbalance can cause fatigue, lack of motivation, depression, decreased libido, poor concentration, decreased muscle tissue and increased body fat. If estrogen levels become too high, a man can develop breasts or “man boobs”—known medically as gynecomastia—as the extra estrogen begins to promote female body characteristics. And if you are overweight or obese, watch out! Excess fatty tissue will promote estrogen dominance even more, robbing you of your manhood and setting the stage for prostate cancer, depression, hypoglycemia and other serious health problems. High estrogen levels can also make chronic diseases, like heart failure, deadly.



Fortunately, this fate isn't inevitable. There are a number of ways to thwart estrogen dominance, from what you eat to the products you use. But, while it's important to eat organic foods and use natural products whenever possible, the best way to keep a lid on estrogen is by boosting testosterone levels. And nothing increases testosterone better than exercise, especially a high-intensity strength training program that builds muscle.

### **TEST PATTERN**

You don't need to wait until your breasts start growing or your prostate begins to give you trouble to find out if you suffer from

estrogen dominance. Some simple tests can give you all the information you need. Ask your doctor to schedule the following:

- Hormone Profile to determine the levels of pregnenolone, total estrogens, DHEA-S, progesterone, bioavailable testosterone, total testosterone and free testosterone.
- Thyroid panel: T3, T4 and TSH
- PSA (Test at age 50 for Caucasian and Asian men; age 40 for African Americans).

A caliper skin fold test can also be useful. For skin fold measurements in males: If the pectoral site is higher than the triceps site this indicates aromatase. Additionally, if the quadriceps skin fold is relatively high, a PSA (Prostate-Specific Antigen) test is in order. Liver enzyme activity and poor detoxification of estrogens are other factors to consider. Excess alcohol consumption and marijuana use can also be the culprit.

## **EXERCISE YOUR OPTIONS**

Nothing beats exercise for balancing your hormones and improving your health. The three key hormones that benefit from exercise are testosterone, Human Growth Hormone and estrogen.

**Testosterone:** Both men and women produce testosterone, which is a key bodybuilding hormone. It boosts basal metabolic rate, decreases body fat, increases feelings of self-confidence and maintains muscle volume, tone and strength. In fact, testosterone, along with Growth Hormone, is key for building the size and density of muscles. The problem is that serum testosterone levels decrease by one percent per year after age 40. If you don't do anything to reverse this decline, you can experience low libido, a decline in sexual function, depression, fatigue, weight gain (especially around the belly) and bone weakening. Adopting a regular strength training routine, however, can increase testosterone levels and reverse these adverse effects.

**Growth Hormone:** Growth Hormone is released from the pituitary gland—both when you exercise and when you sleep.

GH stimulates protein synthesis and helps to strengthen bones, ligaments, tendons and cartilage. It also plays a role in fat mobilization, which helps reign in estrogen levels. Increased growth hormone provide a multitude of immediate benefits including increased energy, enhanced ability to concentrate, and more interest and ability in sex. Long-term benefits include increased aerobic capacity and strength, thicker hair, tightening of wrinkles and loose skin, a decrease in visceral fat and stronger bones. And, according to studies, it's never too late to reap these benefits. Even men in their 60s, 70s and 80s can increase both testosterone and GH levels with regular exercise.

**Estrogen:** Exercise lowers estrogen levels in both men and women. And, according to research by the National Cancer Institute, it's also why moderate-intensity aerobic exercise can help reduce body fat, especially the dangerous internal abdominal fat you can't see. Exercise also reduces overall weight and help you maintain a lean physique, which also keeps estrogen levels in check.

There are three major types of exercise that you should be doing: Cardio, flexibility and strength. All of them are critical to good health, but they don't all impact hormones in the same way.

## **MOVE IT OR LOSE IT**

Cardiovascular exercise, also known simply as "cardio," is aerobic exercise that involves the large muscles like the legs. During a cardio session, the heart and lungs are forced to work harder than normal. Cardio pumps large amounts of oxygen-rich blood throughout the body and strengthens the heart and lungs. It also lowers estrogen levels, improves your cholesterol levels and reduces blood pressure. If that weren't enough, cardio improves your stamina and burns calories.

The goal of cardio is to raise your heart rate to a certain level and keep it there for 20 minutes. When you exercise, your heart beats faster to meet the increased demand for more blood and oxygen. The more intense the activity, the faster your heart will beat.

Therefore, keeping an eye on your heart rate during your workout can be an excellent way to monitor exercise intensity.

Figuring out your target heart rate—the optimal rate your heart should beat during aerobic exercise—is a simple, two-step process. First, calculate your maximal heart rate by subtracting your age from the number 220.

Then use that number to determine your target heart rate zone.

Your target heart rate is the number of beats per minute (bpm) at which your heart should be beating during aerobic exercise. For most healthy individuals, this range is 50 to 80 percent of your maximal heart rate. So, if your maximal heart rate is 180 bpm, the low end of the range (50 percent) would be 90 bpm, and the high end of the range (80 percent) would be 144 bpm. Why does this matter? These numbers can be used as an indicator of how hard you should be exercising. Those just beginning an aerobic program should aim for the low end of the zone and pick up the intensity as they become more comfortable with their workout.

To get the most benefit out of your cardio program, strive to do some type of aerobic exercise for at least 30 minutes five days per week. A good tip to keep your cardio interesting is to mix it up throughout the week. Here are a variety of aerobic exercises to choose from:

## **CRANK UP YOUR CARDIO**

Bicycling	Rowing
Brisk Walking	Soccer
Cross Country Skiing	Spinning Classes
Dancing	Step Aerobics
Elliptical	Swimming
Jogging	Uphill Hiking
Kickboxing	Volleyball
Mixed Martial Arts	Water Aerobics
Racquetball	Zumba

# RUBBERBAND MAN

Stretching lengthens your muscles and tendons and thereby improves flexibility and helps prevent injury. It also helps to maintain range of motion as a person ages.

You should stretch only *after* warming up, when the muscles are warm and less likely to tear. If you follow your cardio with stretching, you should be in good shape. Otherwise, simply jog in place for a few minutes to warm up your muscles and get your heart rate up.

At first, each stretch should be held for five seconds, which should be increased to 20 to 30 seconds as you become more flexible. Relax, then do the same stretch again, stretching further if possible. Stretching exercises should be done daily and can be incorporated into your overall workout. Here are some basic stretches to improve your flexibility:

Priformis Stretch



Wrist Stretch



Hip Flexor Stretch



Trapezius Stretch



Leg Stretch



Hamstring Stretch





Inner Thigh Stretch



Side Stretch



Quadriceps Stretch



There are three things you should know before you start a flexibility program. First, don't bounce. Holding a stretch is more effective and there is less risk of injury. Second, remember to breathe. Many people forget this basic rule and hold their breath during a stretch. This prevents much-needed oxygen from reaching the muscles being worked. Finally, if a stretch hurts ease up or stop before you injure the muscles.

## **PUMP IT!**

As important as cardio and flexibility are for balancing estrogen levels and maintaining good health, if you are looking to boost your testosterone levels you must include strength training in your exercise program. Because testosterone is needed to build muscles, strength training spurs the body to make higher levels of this critical hormone.

Of course, strength training (also called resistance training or weight lifting) imparts many other benefits as well. It improves your muscles and the nerve pathways that direct and control movement. In addition, strength training increases your general fitness, including enhanced function of the respiratory, cardiac and metabolic systems. Here's another bonus: Resistance training thickens muscles—and the more muscle you have, the more calories you will burn and the more testosterone your body will produce.

Like cardio exercise, resistance training burns calories during the workout. The difference is that, once you're finished doing your aerobics, your body quickly stops burning calories. But after you've finished a weight lifting routine, your body continues burning calories for up to one hour.

If you are new to strength training, it's important to start slowly. This will help to prevent sore muscles and possible injury. Choose the lowest weight possible and start by doing 10 to 12 on each side. Over the next few weeks, increase the weight and the number of repetitions. It's ideal if you can work with a professional trainer to help you set up a program that's right for you and who can teach you the correct way to do each exercise. But hiring a trainer isn't essential. Just remember: don't attempt more than your muscles can handle. Even if you start with just five or 10 pound weights, you will improve and get stronger, which means that you'll be pumping more weight sooner than you think. Don't get ahead of yourself!

## **FREE WEIGHTS OR MACHINES?**

If you decide to workout in a gym or fitness center, you'll promptly be confronted by a choice: should you bulk up with free weights or head for the resistance machines? Machines do a superior job of guiding your muscles through a range of motion with proper form—a particular asset on exercises that take the muscle through an arc, such as leg and arm curls, or flies that work the chest. Because they are more controlled and generally keep the weights at a distance from the lifter, you are less likely to get hurt using machines—and you don't need a spotter. Because machines typically demand less skill, they are ideal for beginners.

Free weights, on the other hand, require more control, so they utilize more muscles to help guide the barbell or dumbbell. For that reason, free weights develop areas that might not be used on a machine. They are also excellent for developing tendon and ligament strength, all of which makes free weights the tool of choice for serious lifters. If you are a beginner and you try to lift more weight than you are able to without the guidance of a trainer, you can sustain serious injury.

## **YOUR MAJOR MUSCLE GROUPS**

When selecting exercises for your strength routine, it's important to choose at least one exercise for each major muscle group.

This prevents muscle imbalances that can lead to injury. Let's take a look at the major muscle groups and a few of the exercises that target them:

**Gluteals** – This group of muscles (often referred to as 'glutes') includes the gluteus maximus, which is the big muscle covering your butt. Common exercises are the squat and the leg press machine. The glutes also come into play during lunges, tall box step-ups and plyometric jumps.

**Quadriceps** – This group of muscles makes up the front of the thigh. Exercises include squats, lunges, the leg extension machine and leg press machine.

**Hamstrings** – These muscles make up the back of the thigh. Exercises include squats, lunges, the leg press machine and leg curl machine

**Hip abductors and adductors** – These are the muscles of the inner and outer thigh. The *abductors* are on the outside and move the leg away from the body. The *adductors* are on the inside and pull the leg across the centerline of the body. These muscles can be worked with a variety of side-lying leg lifts, standing cable pulls and multi-hip machines.

**Calf** – The calf muscles are on the back or the lower leg. They include the gastrocnemius and the soleus. The gastrocnemius is what gives the calf its strong rounded shape. The soleus is a flat muscle running under the gastrocnemius. Standing calf raises give the gastrocnemius a good workout, while seated or bent knee calf raises place special emphasis on the soleus. These small muscles can handle a relatively large amount of weight.

**Low back** – The erector spinae muscles extend up and down the back and aid in good posture. Exercises include the back extension machine and prone back extension exercises. These muscles also come into play during the squat and dead lift.

**Abdominals** – These muscles include the rectus abdominus, a large flat muscle running the length of the abdomen, and the external obliques, which run down the sides and front of the abdomen. Standard crunches and curls target the rectus abdominus. Reverse curls and crunches (where the hips are lifted instead of the head

and shoulders) target the lower portion of this muscle. Crunches involving a rotation or twist work the external obliques.

**Pectoralis major** – Large fan shaped muscle that covers the front of the upper chest. Exercises include push-ups, pull-ups, regular and incline bench press and the pec deck machine.

**Rhomboids** – Muscles in the middle of the upper back between the shoulder blades. They're worked during chin-ups, dumbbell bent rows and other moves that bring the shoulder blades together.

**Trapezius** – The upper trapezius is the muscle running from the back of the neck to the shoulder. Exercises include upright rows and shoulder shrugs with resistance.

**Latisimus dorsi** – Large muscles of the mid-back. When properly trained they give the back a nice V shape, making the waist appear smaller. Exercises include pull-ups, chin-ups, one arm bent rows, dips on parallel bars and the lat pull-down machine.

**Deltoids** – The cap of the shoulder. This muscle has three parts, anterior deltoid (the front), medial deltoid (the middle), and posterior deltoid (the rear). Different movements target the different parts. The anterior deltoid is worked with push-ups, bench press and front dumbbell raises. Standing lateral (side) dumbbell raises target the medial deltoid. Rear dumbbell raises (done while seated and bent at the waist, or lying face down on a flat bench) target the posterior deltoid.

**Biceps** – The front of the upper arm. The best moves are biceps curls. They can be done with a barbell, dumbbells or a machine. Other pulling movements like chin-ups and upright rows also involve the biceps.

**Triceps** – The back of the upper arm. Exercises include pushing movements like push-ups, dips, triceps extensions, triceps kick-backs and overhead (French) presses. The triceps also come into play during the bench press and military press.

## **GETTING STARTED**

If you are starting a weight program after years of not training, it's best to start slowly. Workout with a "buddy" if at all

possible...not only for safety, but it can double your enjoyment by sharing the routine with someone else and sometimes may be the motivation you need that day to actually go and workout. Sure, you are full of enthusiasm, but over doing it today will only lead to pain tomorrow. The following approach will give you the maximum results with a minimum of soreness.

**Work out in the a.m.** Ideally, you should train in the morning when testosterone levels are at their peak. In fact, men who train in the morning have 10 to 15 percent higher resting testosterone levels than those who workout in the evening. Plus, research shows that training in the morning leads to a higher testosterone-to-cortisol ratio. This is beneficial because cortisol inhibits testosterone's functions within your muscle cells.

**Stick to one set.** While it's true that most weight lifters complete three sets of each exercise, it's not a realistic goal right out of the gate. One set is enough of an overload during the first three weeks.

**Start light.** During your first workout, use a weight that you could lift for 15 repetitions, but stop at 12. During your second workout, add five pounds at most and aim to do 12 reps, as long as it is not so gut-wrenching it feels like your life will be over if you do 13.

**Don't rush.** Slow down your momentum during the lifting phase of your exercises. This will effectively increase the intensity of your workout. One trial of 147 middle-age people found that those who practiced super-slow repetitions experienced muscle gains that were 50 percent greater than those who lifted their weights at a normal speed.

**Listen to your pain.** If you are sore after the first workout, wait until you are not sore before you work out again.

**Never work the same muscle group two days in a row.** Testosterone-boosting muscles aren't created while you are working out. They are created after you are finished. Lifting weights creates micro-tears in the muscle tissue. During the 48 hours after you've finished working out, these tears are repaired. This is when your body actually builds new muscle tissue.

**Cut loose after three weeks.** By this time, you should have established a resistance load that is challenging, but not so heavy it will make you sore. Add sets and follow the program that you and/or your trainer has developed.

## **YOUR LONG-TERM PROGRAM**

Once your three-week program is done, it's time to up the ante. If you want to tap your muscles full potential and encourage your body to produce testosterone, you need to do more than one set. Research shows that to make maximal gains, you need multiple sets because the additional effort challenges extra muscle fibers that would otherwise get off easy. In fact, researchers at Penn State University determined that multiple sets—at least three—foster greater increases in testosterone. Rest a full minute between sets.

If you are short on time but still want to give your muscles an added kick, try to exhaust your muscles in one set, then reduce the weight by ten pounds and immediately do a few more repetitions. In a two-month study of exercisers who limited lifts to one set, men and women who added this small measure of extra work during their second month of training developed 40 percent more strength than subjects who continued training with just one set.

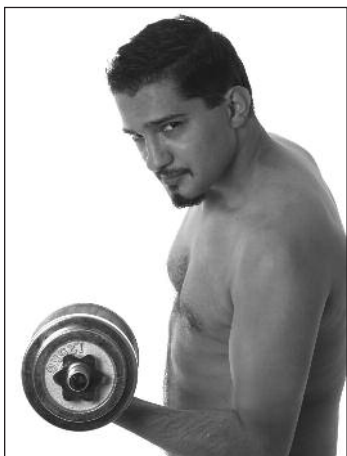
Whatever you do, aim to make your last set the hardest: Your final lift is the benchmark for your progress. Let's say you are doing three sets of 10 repetitions. If you think you can do 12 during the first set, stop at 10; otherwise, you might use up energy you will need to complete the remaining sets. On the last set, however, push to do as many reps as you can.

To truly beef up your testosterone levels, the bulk of your workout should involve "compound" weight-lifting exercises that train several large muscle groups, and not just one or two smaller muscles. For example, studies have shown that doing squats, bench presses or back rows increases testosterone more than doing biceps curls or triceps pushdowns, even though the effort may seem the same.

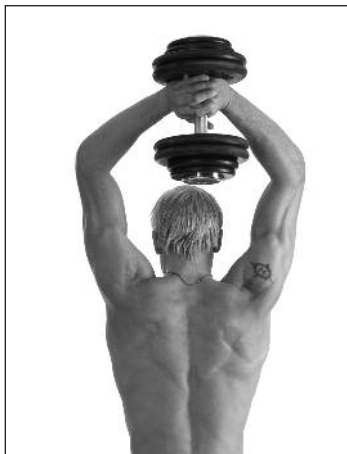
## **YOUR TESTOSTERONE-BOOSTING WORKOUT**

Squats are probably the best weight training exercise you can do to boost testosterone. They work many different muscle group and are an easy exercise to do with a lot of intensity. Deadlifts are another great compound exercise that will help raise your testosterone levels. Presses (bench, leg, shoulder, etc.) are great compound exercises that will also increase your natural levels of testosterone. Here are examples of these testosterone-inducing weightlifting exercises, as well as other standard lifting moves:

### **BICEPS**



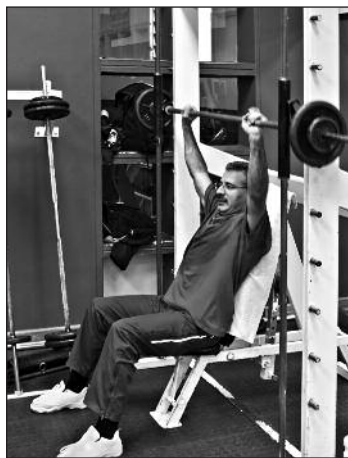
## TRICEPS



## FOREARM

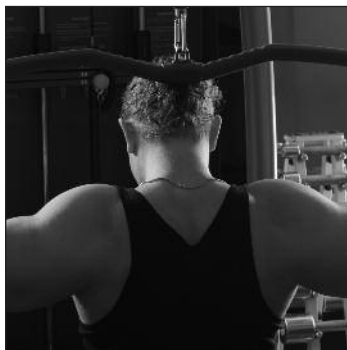


## CHEST





## BACK



## SHOULDERS



## LEGS



## ABS



You can maximize your weightlifting workouts even more by mentally focusing on the specific muscles you are working as you work them. And don't forget to breathe!

## **POWER UP WITH PLYOMETRICS**

Once you are comfortable with your exercise plan, you can challenge your body even more with a technique known as plyometrics. Plyometric exercises are high intensity moves used to develop athletic power (strength and speed). Plyometric training involves high-intensity, explosive muscular contractions that invoke the stretch reflex (stretching the muscle before it contracts so that it contracts with greater force). The most common plyometric exercises include hops, jumps and bounding movements. One popular plyometric exercise is jumping off a box and rebounding off the floor and onto another, higher box. These exercises typically increase speed and strength and build power. While they don't effect testosterone levels, plyometrics are a great addition to weight lifting.

As you gain lower body strength, plyometrics can be integrated into your workout. For example, you can do plyometrics in between your strength training sets. There are many plyometric exercises for both the upper and lower body.

**Squat Jumps:** Stand with feet shoulder-width apart, trunk flexed forward slightly with back straight in a neutral position. Arms should be in the "ready" position with elbows flexed at approximately 90°. Lower body so that your thighs are parallel to the ground and immediately explode upwards vertically and drive arms up. Do not hold a squat position before jumping up—keep the time between dipping down and jumping up to a minimum. Land on both feet. Rest for one to two seconds and repeat.

**Lateral Hurdle Jumps:** Stand beside object to be cleared. Bring knees up and jump vertically but also laterally off ground and over the barrier. Land on both feet and immediately jump the other direction over the barrier. Try not to pause between jumps or sink down into a squat position.

**Squat Throws:** Stand with feet apart. Knees should be slightly bent. Hold a medicine ball at chest level and squat down to a paral-

lel position. Quickly explode up and jump as high as you can. As you start your jump you should start to shoulder press the ball up and reach full extensions with the arms when you are at the peak of your jump. Push the ball as high as possible into the air. Try to minimize the time spent in the squatted position. It should be a quick squat and jump. Catch ball on the bounce and repeat the entire sequence.

**Plyometric Push-Ups:** Start by getting into a push-up position. Lower yourself to the ground and then explosively push up so that your hands leave the ground. Catch your fall with your hands and immediately lower yourself into a push-up again and repeat.

## **FEED YOUR MUSCLES**

This isn't a nutrition book. But what you eat both before and after your workout impacts the quality of your workout, helps your body burn fat (which lowers estrogen levels), aids in muscle repair and indirectly influences your testosterone levels.

**Pre-Workout:** Opt for a balance of protein and carbohydrates. Try a bowl of oatmeal and four scrambled egg whites; a turkey sandwich with Ezekiel bread, 3 oz. turkey, tomatoes and mustard; or a handful of raisins and nuts. Raisins give you simple carbs for immediate energy and nuts give you a little fat and a feeling of satiety.

**Post-Workout:** Again, you should be eating protein and carbs after exercising, and they should be consumed within 90 minute of finishing your workout. But the post-workout protein should be high quality. While egg whites, chicken and tuna fish are fine sources of protein, they aren't the ideal type of protein after your workout because they digest slowly. A better option is whey protein mixed with water, soy milk or fruit juice and possibly some fruit to create a whey protein shake. A whey protein shake will be digested by your body much faster than a whole food because it is a liquid. And that means it can get to work rebuilding your muscles quickly.

To get the most out of your whey protein, opt for a whey isolate powder instead of a whey concentrate. Whey isolate is the

highest quality, most absorbable protein you can consume. Whey concentrate, on the other hand, offers less protein. It may also contain undesirable additives like lactose and fat. The cleaner profile in whey isolate is more conducive for adding muscle, boosting testosterone levels and losing weight.

## **CREATE YOUR OWN HOME GYM**

Some men thrive in a fitness club setting, others like the great outdoors. But for cost and convenience, you can't beat a home gym. Before you start adding up the costs of equipping your private gym, know this: You don't need to spend a fortune on high-tech equipment to get a great workout.

Some of the best cardio equipment is quite inexpensive. A jump rope or aerobic exercise DVDs fit the bill nicely. Choose a variety of DVDs so you can keep your workouts interesting and varied. Strength training can be accomplished with resistance bands or dumbbells in varying weights. You may also want to include a kettle ball. A medicine ball is also a great muscle-building tool.

If you have space, consider a fitness ball. It's a great way to add intensity to your abdominal exercises, especially crunches and twists. Stretching and plyometrics don't require any specialized equipment. Instead of a yoga mat, do your stretching on carpeting. You can also find things around the house to jump over for a plyometric workout.

Setting up an effective home gym can cost less than \$100—and it may well be the best investment you'll ever make. And when your fitness center is just steps away, there won't be any excuse not to get in your daily workout.

## SELECTED REFERENCES

- Baker JR, et al. Effects of age on testosterone responses to resistance exercise and musculoskeletal variables in men. *Journal of Strength and Conditioning Research*. 2006; 20:874-881.
- Buresh R, et al. The effect of resistive exercise rest interval on hormonal response, strength, and hypertrophy with training. *Journal of Strength and Conditioning Research*. 2009; 23:62-71.
- Hulmi JJ, et al. Androgen receptors and testosterone in men—effects of protein ingestion, resistance exercise and fiber type. *Journal of Steroid Biochemistry and Molecular Biology*. 2008; 110:130-137.
- Jankowska EA, et al. Circulating estradiol and mortality in men with systolic chronic heart failure. *Journal of the American Medical Association*. 2009; 301:1892-901.
- Jensen RL, et al. Kinetic analysis of complex training rest interval effect on vertical jump performance. *Journal of Strength and Conditioning Research*. 2003; 17:345-349.
- Lovell DI, et al. Resistance training reduces the blood pressure response of older men during submaximum aerobic exercise. *Blood Pressure Monitoring*. 2009 Jun 18. [Epub ahead of print]
- Luebbbers PE, e al. Effects of plyometric training and recovery on vertical jump performance and anaerobic power. *Journal of Strength and Conditioning Research*. 2003; 17:704-709.
- Mah PM, et al. Obesity and testicular function. *Molecular and Cellular Endocrinology*. 2009 Jun 18. [Epub ahead of print]
- Roberts MD, et al. The expression of androgen-regulated genes before and after a resistance exercise bout in younger and older men. *Journal of Strength and Conditioning Research*. 2009; 23:1060-1067.
- Van den Beld AW, et al. Measures of bioavailable serum testosterone and estradiol and their relationships with muscle strength, bone density, and body composition in elderly men. *Journal of Clinical Endocrinology and Metabolism*. 2000; 85:3276-3282.
- Westcott WL, et al. Effects of regular and slow speed resistance training on muscle strength. *Journal of Sports Medicine and Physical Fitness*. 2001; 41:154-158.
- Yazici M, et al. Evaluation of breast enlargement in young males and factors associated with gynecomastia and pseudogynecomastia. *Irish Journal of Medical Science*. 2009 Jun 4. [Epub ahead of print]

UniScience  Group<sup>®</sup>

[www.unisciencegroup.com](http://www.unisciencegroup.com)

IMBN: 3-TEST101-09



Price U.S.: \$20.00