5 TAX SAVING IDEAS FOR '08 RETURN

WEB DESIGN TIPS FOR SURGEONS

OFFICE WORKOUT 7-SECOND INCREMENTS

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Do You Have 7 Seconds: Your Prescription for a Perfect Physique

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It begins with that first delicious stretch of the morning - after that, work, stress, more work, moments with the family and maybe some sleep. Getting some healthy exercise squeezed in seems nearly impossible. And, vicarious participation in a sport on television doesn't count - unless you are a very enthusiastic fan of some team.

Conventionally we are told in order to stay fit and healthy, to keep lean muscle tissue and lose fat, we have to spend around 5 hours a week training hard - an hour of aerobics, 3 times a week, with a few weight training sessions to build muscle and help prevent osteoporosis and arthritis, and shed those extra pounds of fat that seem to accumulate as we age. When time is of the essence, the good doctor thinks about his patients and often ignores his own good health. So what is one to do?

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Luckily, the conventional advice is neither accurate nor beneficial. In truth, you can get in great shape with less than 5 minutes of exercise a day without the gym. In fact, you probably won't need to get out of your chair for most of it.

Isometrics. Isometrics involve the contraction or tensing up of a muscle without moving the angle of a joint. This can be achieved with or without weights. This article will focus on an isometric contraction on its own without a weight.

Lifting weights causes the fibers of the muscles to contract and tense up. This stress and stimulus causes the muscles to break down and rebuild themselves tighter, firmer, and - after excess stimulus - bigger and stronger.

The answer to developing tighter, firmer muscles is in the tension and intensity, a contraction that produces new muscles growth. Weight lifting is an artificial means of causing muscles to tense. An object is perceived as heavy by your body, and, as such, the body recruits more muscle fiber than a light weight, like a pencil. This recruitment of more muscle fiber causes extra tension - hence extra stimulation, hence tighter firmer muscles.

An Isometric Contraction is the voluntary tensing of a particular muscle. This tension needs only to be held for about 7 seconds. If you are tensing the muscle properly you should be quite fatigued by this stage because all the fibers in the muscle are stimulated. In 1953 by two German scientists named Hettinger and Muller discovered that with a single contraction lasting only 7-12 seconds once a week, enough stimulus could be produced to increase strength by 6% PER WEEK (Isometrics-The Regulation Of Muscular Strength, 1953, Muller, Erich, A). There was no additional benefit in performing more than one contraction a day. But it gets even better.
Subjects in a later study performing a daily 7 second contraction increased their strength by 72% in 46 weeks. The fall of strength after the end of training is very slow. 70 weeks after the end of training their strength was still 42% higher than before the beginning of training. Over a year and a half they were still 42% stronger than when they started.

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They concluded, as have many studies since, that isometric training was the single most effective method of strength and physique development achievable.

In 2006 study, a single 5 minute routine comprised of 10 seven-second contractions produced up to 9.3lbs of muscle tissue (Little et al). That’s one 5 minute workout producing the amount of muscle tissue developed through conventional training after a minimum of 3 months.

Isometrics Advantages. The most attractive aspect of isometric training, however, is that you can do it anywhere, at any time—it like the office. No need to change into fresh clothes, you won’t break a sweat. No need to shower. No need to drive to the gym. No need to get out of your chair if you don’t want. Here are some additional advantages:

• Increases Your Strength Faster Than Any Other Form of Training. This is because it works the muscles more intensely and in a shorter space of time over conventional methods. In fact, you can finish a workout in as little as 5 minutes,
• Increases Neurological Strength. Isometrics teaches your body to recruit more muscle fiber for each movement; thus your increased strength comes not just from more muscle, but from more efficient muscle,
• Can be Done Anywhere. It requires no special equipment or a large commitment of time. You can do Isometric Training in your car while stuck in traffic, in the shower, in the office between patients, even while reading this article,
• Safer Than Conventional Training. Isometrics doesn’t involve movement or weights, so they are far safer than any other form of exercise and often used in rehabilitation,
• Dramatically Improve Strength Faster Than Conventional Training. Isometrics has been proven to increase the strength in lifts such as the bench press by as much as 40% and in the Nautilus North Study with an average increase of over 84%, and

• Lowers Stress. A few minutes exercise a day can significantly reduce stress, particularly with Isometrics. A five minute series of exercises relaxes the muscles, and with that comes relaxation of mind. Do you have an important presentation or surgery to attend? Take the time for 5 minutes of exercise, and you’ll feel more confident focused and relaxed, making a much better impression and improving your performance.

Try the following exercises.

Isometric Breathing. This is, in fact, the very first exercise. Mastery of this one skill, aside from developing a tight toned waistline, simultaneously builds the connection between mind and muscle that allows you to develop peak muscular contraction with incredible results. You can perform this either standing up or lying down. Lying down often helps when first learning this technique as you will
be able to feel how your body moves with greater ease, so we will start from there:

- Lie down with your back on the floor and let your arms relax palms flat down by your sides, Inhalé deeply through your nose and take in that pure air all the way down to your stomach. (An easy way to see if you’re doing this right is to place something, say a shoe, on your stomach and watch it rise upwards),
- Once you can’t breathe in anymore tense the muscles of your stomach and pull the muscles inwards. Hold that tension for 7 seconds and then slowly exhale,
- As you breathe outwards squeeze your abs inwards as tightly as possible while making “ssssss” or “ffff” sound,
- When the abs area as hard as possible (they should be shaking) and hold for another 7 seconds, and
- Without relaxing the muscles perform this deep breathing exercise 10 times.

You can practice this anytime you like, but I highly recommend doing so first thing in the morning before you get out of bed. Then anytime you wish to re-energize yourself and increase your mental clarity feel free to practice this again. This breathing technique is the most important aspect of isometrics. Breathing into your muscles increases blood and oxygen supplies, which in turn makes them bigger and stronger. This is most evident when applied to muscles such as the pectorals (chest) and biceps. Using this technique it is easily possible to add over an inch to your arms alone within a few minutes solely as a result of blood volume increase in the capillaries.

**The Lying Back Extension.** This is a great exercise for the neck, upper and lower back, particularly for training and developing the postural muscles of the Erector Spine. Take special care though not to raise your head backwards to avoid an overstressed neck. The idea is for your body, from the top of your head to the base of your spine, to be located in muscular contraction as though one solid piece - not to see how far back you can pull your head.

- Lie face down on a firm but comfortable surface such as an exercise mat or soft carpet,
- Keep your feet close together, toes pointed, your head slightly raised,
- Place your hands behind your head, interlacing your fingers,
- Slowly begin to push upwards with your head (not your neck) and back while pressing down and resisting with your hands,
- Build the tension in your back muscles as you breathe in for 3 - 4 seconds,
- Tense your back and body completely and push upwards as hard as you can while resisting with your hands and breathing out in a “SSSS” sound for 7 - 12 seconds, and
- Slowly relax and lower your body as you breathe in gently for 3 - 4 seconds.

Once comfortable with this exercise, you can vary it by leaning to the left, then to the right. Your right elbow is higher than the left; then tense in this position, and repeat with the left side raised.

**The Pec Squeeze - Mid Chest Definer.** This exercise focuses on the mid chest fibres, particularly the sternocostal heads, though it works on all of the chest musculature. This exercise thickens and strengthens your mid chest fibres increases the definition between pectorals.

- Stand tall and straight with your feet hip distance apart and your toes pointing forwards,
- Keep you knees soft, slightly bent, and your abs tucked in tight,
- Bring both hands to the centre of the chest, just below chin level with your arms at a 45 degree angle from the trunk,
- Clasp the left in the right, i.e. the fingers of the left should point upwards and the fingers of the right should point forwards,
- Point your elbows outwards to the side and away from the chest,
• Slowly begin to push inwards with equal tension from both arms. Tense and flex your chest muscles hard,
• Build the tension in the chest muscles as you breathe in for 3 - 4 seconds,
• Tense completely and push inwards as hard as you can while breathing out in a “SSSS” sound for 7 - 12 seconds, and
• Slowly relax and breathe in gently for 3 - 4 seconds.

Once you have mastered the basic form feel free to reverse the hand position so that your left covers the right. You can also perform two additional variations by clasping one hand in a fist; start with the right fist clasped in the left hand, then reverse. Remember you only need one repetition of each movement - so for this exercise you would have 4 separate hand positions. Apply yourself fully to each exercise.

The Wall Squat. This exercise is based on Kiba Dachi – or the Horse Stance from Shotokan Karate. This builds rock solid legs like nothing else.
• Lean against a solid wall,
• Keeping your back flat, walk slowly walk your feet out, and bend your knees, lowering your body against the wall until you are in a half squat with your knees at a 90 degree angle,
• Your knees should be level with your hips and directly above your ankles, forming a square against the wall and floor,
• Slowly begin to push your bum and back against the wall and your legs downwards as though you were trying to push the wall over. (See why I said a solid wall - I did this once against a cheap house wall and succeed in demonstrating my strength by going right through it!),
• Build the tension in the leg muscles as you breathe in for 3 - 4 seconds,
• Tense completely and push against the wall and downwards against the floor as hard as you can while breathing out in a “SSSS” sound for 7 - 12 seconds, and
• Slowly relax and breathe in gently for 3 - 4 seconds.

Once you have mastered this basic form, try the following variations. Perform the exercise exactly as described above, except this time with your toes pulled upwards so only the balls of your feet make contact against the floor. Then try it only with only your toes touching, rising high up on your calves. Enjoy these great exercises and introduce yourself to a better body, better performance and better health with isometrics.