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ABDOMINAL TRAINING AND NUTRITION

In order to slice centimetres off our waistline you need to reduce the amount of bodyfat, whilst maintaining a healthy, balanced diet and exercise the "big" muscles of the body through running, cycling, rowing, circuit classes in order to "burn off" unwanted energy. When the amount of energy going in to your body as food equals the amount going out through activity and exercise, you are said to be in "energy balance". But this must be coupled with specific exercise to tone and shape the muscles of the abdomen or they will remain undefined.

THE ABDOMINAL MUSCLES

There are four principal abdominal muscles. The rectus muscle is situated in the centre of the abdomen and bends the trunk. This muscle runs from the lower rib to the pubic region. In women this region splits during pregnancy to allow for the bulk of the baby. At the side of the abdomen there are two diagonal muscles, the internal oblique and external oblique. The obliques twist the spine. Underneath the oblique muscle lies the 'transversus abdominis muscle' (TrA). The transversus acting with the obliques pulls the tummy in tight and because of this is often considered your natural 'waist belt'.

TRAINING YOUR TrA

There are many ways to train the TrA. The following is the most basic of all TrA exercises, and instructions should be followed exactly:

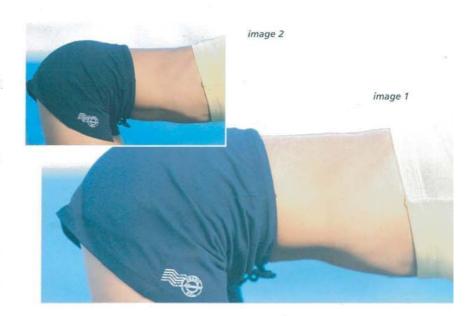
a) Kneel on hands and knees. The hands are directly below the shoulders and the knees directly below the hips. In this position the abdominal contents are against the abdominal wall creating a stretch reflex or a pre-stretch on the TrA.

b) The spine must be maintained in a neutral position. That is with a slight curve in the lower back. Now take a deep breath and allow the abdominal wall (belly button) to drop to the floor. See image no.1.
c) Next, exhale and draw the belly button towards the spine, in doing so, activating the TrA. Do not allow the spine to lose that curvature, ie. do not flex the spine. See image no.2
d) Hold this position for 10 seconds, relax for 10 seconds, and then

repeat the process 10 more times.

As can be seen from the photographs (or not!), this is a very subtle,

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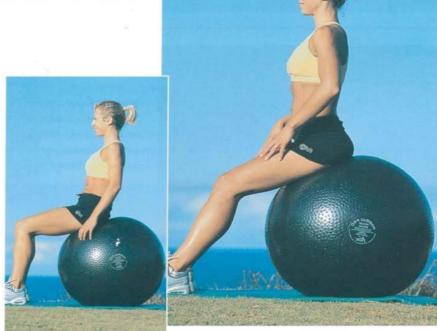
FIVE AB FAB EXERCISES

Here are five other abdominal exercises using the Swiss ball. Before starting any of these exercises, please ensure that the Swiss ball is correctly sized for you, ie. your thighs should be parallel, or slightly above parallel to the ground when sitting on the ball.

PELVIC ROCK:

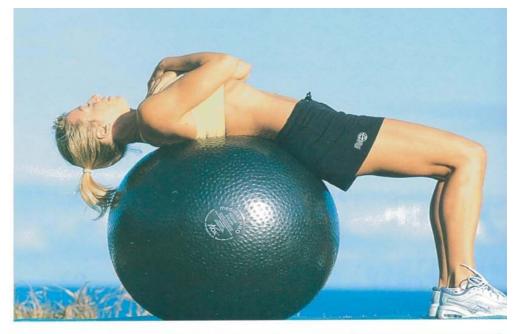
Ideal to obtain lower abdominal control.

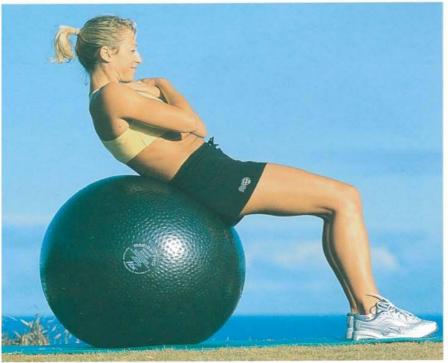
- Sit on the Swiss ball in an upright position with a neutral spine. You should have a slight curve in the lower back, your shoulders should be aligned with the hips and ears in line with the shoulders.
- Keeping your upper body perfectly still, take a deep breath. Now, as you gently breathe out (drawing the belly button towards the spine), rock the pelvis forward (tucking your tail), thus activating the TrA. As you now go the other way, breathe in, relaxing the TrA.
- Perform this exercise in a controlled manner. Work on doing 3-4 sets of 10-15 reps with a 30 second break between sets.

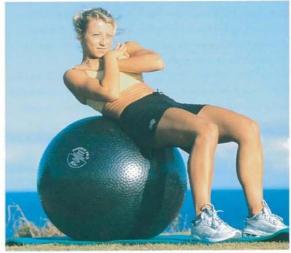


SWISS BALL CRUNCH: The classic abdominal exercise.

Lie supine (face up) over the Swiss ball, head resting back over the ball. Make sure that your tongue is resting on the roof of the mouth (just swallow and it will go there automatically). Cross your arms over your chest. Now, with your chin tucked in, curl up from the head one segment at a time until the rectus abdominis is fully contracted (at the same time draw the belly button towards the spine). Do not go too far, as you do not want to activate the hip flexors any more than they already are. Slowly reverse the curl until your head and neck are on the ball.







TWISTING CRUNCH:

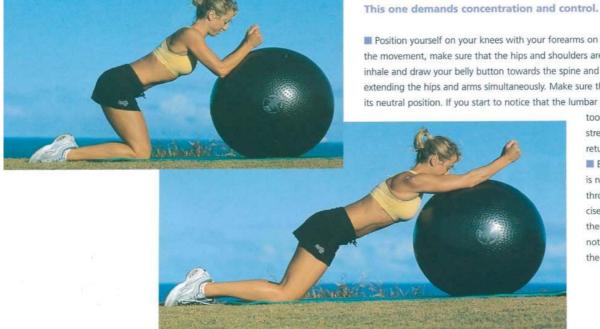
A good variation that brings into play your obliques.

Instructions for this exercise are as per the abdominal crunch, except you will twist the body on the curl-up, ie. right shoulder to left knee, then left shoulder to right knee, etc.

FORWARD ROLL:

Position yourself on your knees with your forearms on the Swiss ball. Before beginning the movement, make sure that the hips and shoulders are at 90 degrees to the body. Now inhale and draw your belly button towards the spine and start the forward roll movement extending the hips and arms simultaneously. Make sure that your lumbar curve is always in its neutral position. If you start to notice that the lumbar curve is increasing you have gone

too far. This indicates that there is a strength deficit at that point. Now return to the start by slowly exhaling. Be aware that the lumbar spine is neither to flex nor hyperextend throughout this movement. This exercise targets the lower abdominals, therefore your rectus abdominis should not be fully contracted on initiation of the movement.

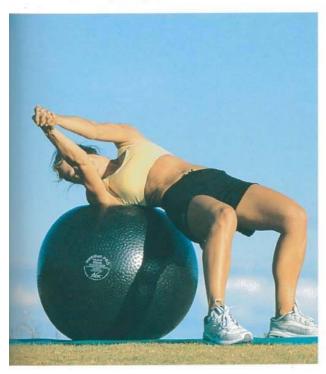


RUSSIAN TWIST:

Not only targets your abs, but also your butt and legs.

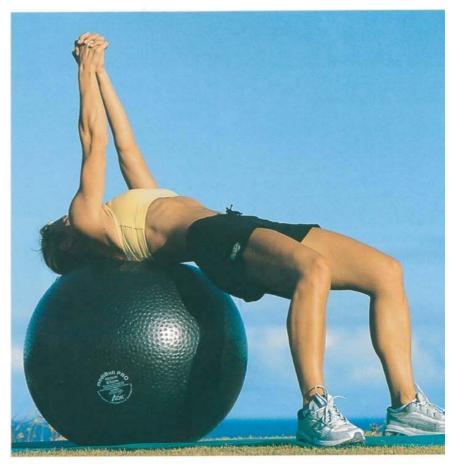
■ Start by lying on the ball with your head, neck and shoulders on the apex of the Swiss ball. Your hips should be elevated off the floor and the buttocks active. Clasp your hands together above your head in front of your eyes.

■ Keeping the hips up, the butt active, draw the belly button in and rotate to one side. At the end of this movement, if you rotated to the right, your right shoulder should now be on the Swiss ball. Repeat to the other side. The whole idea of this exercise is to rotate the trunk and let the Swiss ball roll below you, not you rotate over it. ■ When performed correctly, this exercise will predominantly work the obliques (muscles on the side of your abdominal wall), and also the butt, hamstrings and quads.



Abdominal Training and Back Pain

The deep trunk muscles make the spine more stable, holding the spinal bones together. The muscles on the surface cause movement. If the hip flexor muscle is worked too hard it will pull on the lower spine, dangerously increasing the pressure within the discs. For this reason all the exercises used and the method of execution aim to reduce the work on the hip flexor. Safe movement keeps the discs healthy, but poor movements allow stress to build up in the discs over many years. Short range crunch movements such as those used by bodybuilders should not be attempted by any one who has not yet achieved a level of training that allows trunk muscles to stabilise the spine. Only when this has been achieved can you move on to work the muscles to move the spine and provide power.



REST, REPS & SETS

Just like every other muscle in the body, the abdominals need to recover. Also, training the same abdominal group daily is not going to get you the results you desire. You have four abdominal muscles; one of which gets activated in just about all the exercises in this article. Therefore, what I recommend is that you can have an upper training day, a lower day, and obliques day.

To begin you should aim to complete 2 sets of 10-15 reps, with a tempo of 2120, i.e. 2 seconds up, 1 second hold, 2 seconds down, 0 seconds pause, then repeat. Once your form is correct and you feel comfortable, then you can alter the parameters to suit you and your activities.

As far as increasing the amount of repetitions are concerned, just remember that doing hundreds of reps are a complete waste of time. If you think by doing this you will lose the flab off your abdominals, think again!