

Establishing core strength

These days the term core strength can be found throughout the fitness world but how does it relate to yoga?

Because of the holistic nature of yoga core strength refers to more than the physical:



It relates to how we can balance and strengthen the deeper core muscles, to include the **abdominal muscles (especially the transversus abdominis), the smaller, deeper spinal muscles and the pelvic floor muscles** so that they protect the lower back region; in addition utilizing these deeper core muscles assists in creating good posture, stabilizing the pelvis and the lower back, and helps to remove joint pressure. These core muscles attach to the spinal column and the pelvis and are the place at which movements need to be initiated; they are the source of our stability.

At another physical level when the core is weak this diminishes our agni or digestive fire meaning we will not be able to digest properly or assimilate nutrients leading to lower energy levels and susceptibility to illness. On a more subtle level this in turn leads to lack of clarity in thinking and the likelihood of emotional imbalance. In a very real way we experience the inability to digest and assimilate on all levels.

At a more esoteric level the core relates directly to our sense of personal power and how we see our place in the outer world, particularly relating to the functioning of manipura chakra, the solar plexus chakra, where without a strong core we are likely to lack confidence, feel disempowered and easily moved off-balance.

How can we strengthen the core?

In yoga we do not consider sit-ups, crunches etc. to be a helpful possibility as they actually **shorten the abdominal muscles, weaken the back muscles and reduce the visceral cavity spaces**; and we must carefully work to strengthen the deepest muscles rather than simply harden the more superficial muscles.

Whenever we take our attention to our core in asana we will find that this assists in contracting the core muscles and right from the beginning we can learn to employ these muscles if directed to them. The good news being, as your A & P course points out, that when we contract any one of these three sets of muscle, i.e. the abdominal muscles, the pelvic muscles or the deepest spinal muscles (more difficult!) then the other sets are also engaged as they have a common nerve supply.

We can actually learn about the core muscles in the simplest of asana so for instance in Jathara parivritti, supine lying twist, if we move slowly from side with awareness of the core muscles we will feel them lifting and lowering the legs or if we perform apanasana, the gas ejector pose slowly with awareness of the core muscles and let them aid the movement whilst keeping the lower back to the floor then this will strengthen this area.

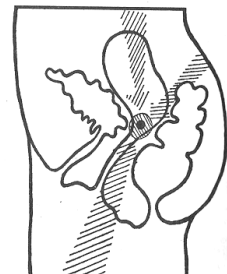
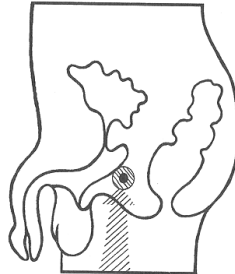
The same is true for all asana where if focus is drawn to this area then strengthening and support will be given.

There are also certainly asana where a strong core is necessary and strengthening will gradually occur such as the plank pose where all four layers of abdominal muscles are engaged; other asana of this nature are chaturanga dandasana, four limbed pose, and vasisthasana, pose of vasistha.

Additional aids for core strength

In yoga asana different traditions have different ways of ensuring core stability and one very significant technique is **mula bandha** (moola), the root energy lock.

For men mula bandha sits between the genitals and anus and for women at the opening of the cervix.



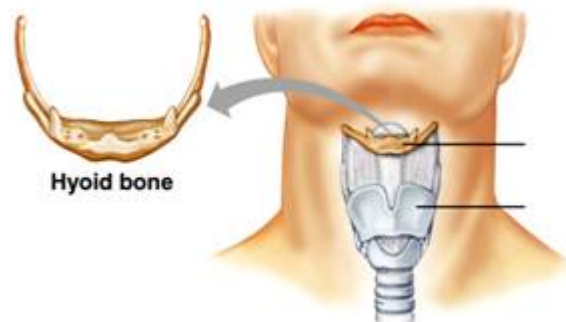
To locate it we can perform ashwini mudra (contraction of the anal sphincter) and then vajroli mudra (contraction of the urinary muscles) then mula bandha can be found between the two, rather like an inverted umbrella closing.

This bandha can be used to great effect to create core strength and has the additional benefit that when employed it grounds energy downwards whilst simultaneously lifting energy upwards.

We should not create any physical tension when practicing this bandha and sometimes it is actually helpful to mentally engage it. We may prefer to simply refer to the pelvic floor at first!

Another possibility to aid core strength is perhaps surprisingly to engage the **hyoid bone**, a small bone at the top front of the throat, unusually having no skeletal attachment only a muscular one.

To engage the hyoid bone we extend the neck and draw it slight inwards and when you do this hopefully you will notice how this subtle action engages the muscles of the front wall of the trunk. We should again take care that we do not create tension and become rather stiff-necked. This movement helps to explain how in backbends, especially at first it is better to keep the neck extended rather than hyper-extended, where the abdominal wall can easily lose tone.



Finally consciously using the breath in asana will aid core strength as each time we exhale we can contract the abdominal muscles, indeed ideally in asana **the lower abdominals remain somewhat engaged** so we can control the depth and speed of the breath as we practice asana.

Many traditions such as Asthanga Yoga and Vinyoga also employ ujjayi breathing when practicing asana so there is even more control over the intensity of the breath.

When the abdominals are contracted some traditions such as Asthanga Yoga call this uddiyana bandha and certainly uddiyana bandha does consist of contracting the abdominal muscles, however when employed during asana this can only ever be a very soft version of the full abdominal lock which is done with breath retention.

Simple techniques to create core strength

There are however some simple exercise often used in yoga to more specifically develop core strength, these are all however still done slowly and with breath awareness.

1) Abdominal Strengthening

Sit in a comfortable upright position moving through the sequence several times, building the number of repetitions slowly over time.

As you come to each instruction just perform that instruction solely, you are working your abdominal muscles independantly of the breath.

1. exhale
2. contract abdominals
3. inhale
4. exhale
5. release abdominals
6. inhale
7. hold breath
8. contract abdominals
9. relax abdominals
10. exhale
11. inhale
12. hold breath
13. contract abdominals
14. exhale
15. release abdominals
16. contract abdominals
17. inhale
18. hold breath
19. release abdominals
20. exhale

Precautionary advice:

Do not perform this exercise if you are pregnant, have abdominal problems or during menstruation. Also take care if you suffer from heart conditions, particularly un-medicated high blood pressure or hypertension since breath retention can make the heart work harder, hold for only a second or avoid this exercise completely if it causes any internal tension at all.

Benefits:

We begin to learn to consciously control the abdominal muscles

2) Abdominal Strengtheners

Stage one:

- 1) Be seated, knees are bent, hands placed behind, lean back and tuck pelvis underneath
- 2) Bend both elbows, rotating the pelvis under, rolling up over the sacrum
- 3) Bring both arms forwards
- 4) Inhaling take both arms out to the sides
- 5) Exhaling bring both arms forwards again
- 6) Continue working in this way in time with the breath

Stage two:

To strengthen the oblique muscles you can then work by inhaling taking only one arm out to the side and down as the head turns watching the movement of the arm, exhaling returning the arm back to the forward position. Work from side to side in this way in time with the breath.

Precautionary advice:

Do not perform this exercise if you are pregnant, have abdominal problems or during menstruation.

You may know of many other possibilities!

Teaching Instructions

When teaching our students we need to keep core strength in mind and certainly we **gradually** need to teach awareness and practical experience of:

- Breath awareness in asana
- Engaging the lower abdominals when breathing in asana
- The use of ujjayi breathing
- The use of mula bandha
- The utilization of the hyoid bone
- How to be aware of the inner body as we practice

This knowledge becomes increasingly important as students move towards more challenging asana, but is of significance right from the start.

(Illustration of mula bandha from Asana, Pranayama, Mudra & Bandha, Bihar School & illustration of hyoid bone from <http://add-ed.blogspot.co.uk/website>)