

### How to use ratios

There are many permutations of ratio possible, with each permutation **creating a different physical, mental or energetic effect.**

In order to use ratios we must initially find our natural length of breath by counting a comfortable inhalation. Usually the ratio is expressed in its lowest numerical form to show the relative length of each part of the breath leaving it up to us to work out the actual number of counts.

At first we may find we can inhale to a count of 4 so:

- for ratio 1:0:2:0 in reality our breath will be 4:0:8:0, i.e. breathing in for a count of 4 and out for a count of 8
- to perform equal length breath (samavritti) we will be working with the ratio 4:4:4:4, i.e. inhaling for 4, holding for 4, exhaling for 4, holding for 4.

As we grow in experience the capacity of our breath may increase so we may find we can inhale to a count of 6. So now, to double the length of the exhalation to the inhalation, the ratio will become 6:0:12:0 and our equal length breath will become 6:6:6:6.

Remember it is **the relative proportion of time spent within each part of the breath** that is of most importance so we must never, never struggle or strain to increase the length of the breath beyond our capacities. The best advice is not to attempt to lengthen the breath forcibly but rather slow the breath, inhaling and exhaling more finely.

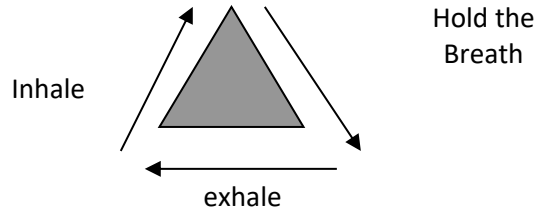
All pranayama techniques should create a feeling of lightness and well-being. If dizziness, disorientation, nausea, ear or eye discomfort are experienced then this indicates that the practice has either been incorrect or is contraindicated and we should desist from the practice. As for asana practice, we need to develop over time, using a vinyasa krama approach and commonsense should always prevail, meaning we should never exceed our current capacities where the breath becomes strained.

A good overall schedule is as follows:

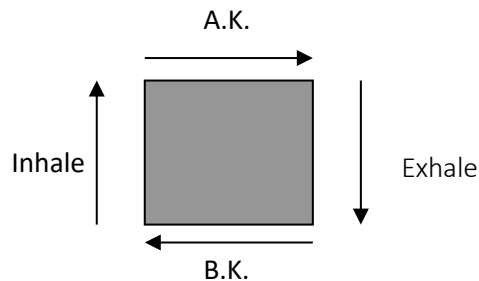
- Initially perform basic breathing techniques
- Become adept at the full yogic breath
- Practice throat control through ujjayi so we can become more aware of the length of the breath and in particular learn to extend the breath without counting its length
- Practice finger control through nadi sodhana, gaining a more precise control over the flow of the breath through each nostril.
- We can introduce finger counting to count the number of rounds whilst working with simple nadi sodhana or ujjayi
- Work with viloma where we make pauses, interrupting the inhalation and exhalation learning to pause with comfort and ease
- **Begin to practice using ratio once control over the length of the breath is possible with ease**
- Then with the ratio of 1:0:1:0 which is simple and balancing
- Start to work with 1:0:2:0 where the exhalation is twice the length of the inhalation which has a relaxing effect and ensures we are capable of a good exhalation
- We can start to learn the bandhas (Mula Bandha & Uddiyana Bandha) experiencing them separately at first, then applying them to pranayama as we continue

## Practicing Pranayama Ratios 2

- Practice with antara kumbhaka using 2:1:2:0.
- We can begin to work with 1:1:1:0 antara kumbhaka, which has a rejuvenating effect. This is often illustrated by using a triangle:



- Progress with antara kumbhaka using 2:1:2:1.
- Once students are comfortable with antara kumbhaka we can introduce bahya kumbhaka, which has a calming, introverting effect. Here we use the sama vritti (same length) ratio of 1:1:1:1 This is often illustrated using a square:



- For more advanced students the classic visama vritti (unequal length) ratio of 1:4:2:0 can be introduced
- In all cases the number of rounds is gradually built up, as is the time spent within kumbhaka. The breath must remain smooth and easy, remember the lungs are sensitive organs!

*Finally to note once we are experienced in pranayama there are ratios based on the ratio 2:1:2:1 which are said to produce very specific effects such as:*

4:2:4:2	<i>helps asthma or convalescence</i>
6:3:6:3	<i>control emotions</i>
8:4:8:4	<i>strengthens, rejuvenates and cleanses</i>
10:5:10:5	<i>speeds metabolism</i>
12:6:12:6	<i>alertness, spiritual development</i>
14:7:14:7	<i>brings serenity</i>
16:8:16:8	<i>the Master's Breath, giving health and longevity</i>

*Do not attempt these ratios now!!*

### General guidelines for working with kumbhaka

As a general rule for breath retention:

- Before using kumbhaka we should always take several ordinary breaths and avoid taking a deep inhalation before breath retention as this is very unhelpful.

## Practicing Pranayama Ratios 2

- We should **always adopt mula bandha when working with breath retention and when holding the breath for more than 10 seconds we also must apply jalandhara bandha**; these are very important because they act as safety locks
- Retaining the breath for 3 to 20 seconds is generally safe for all with the exception of the cautions already mentioned in the previous handout
- Retaining the breath for 20 to 90 seconds creates many prohibitions, both physical & emotional and requires slow progression
- Retaining the breath for 90 plus seconds is very advanced practice requiring great preparation and is beyond the remit of anyone working without expert guidance on a one to one basis.
- When working with A.K. we often find it helpful to inhale a very little after the breath retention before we exhale, this certainly helps to make a smooth continuous exhalation.
- At first we can perform 5 to 6 rounds of pranayama using kumbhaka after which we should take a few natural breaths and when we perform the next round we may find it is easier to perform the kumbhakas as the spleen will have been stimulated to produce more red blood cells.

### Teaching Pranayama to our students

So how can we teach kumbhaka when some students in our class may be unready or it may be contraindicated for some students? Well we can work just as we did with asana by **layering the practice using stages**.

- We can start the practice with natural breathing
- Then the pranayama technique without a ratio
- Then introducing a ratio without kumbhaka
- Then go on to add a kumbhaka i.e. breath retention
- Completing with natural breathing

This can be taught as a continuous flow whenever possible with students staying at the appropriate stage.

e.g. for Ujjayi 1:1:1:0 we can teach the following stages:

- 1) **Natural easy breathing** (releasing, calming the breath)
- 2) **Ujjayi without a ratio** just getting used to the technique and establishing the length of breath (could stay here if inexperienced in Ujjayi)
- 3) **Ujjayi with a ratio of 1:0:1:0** (could stay here if cannot use kumbhaka or inexperienced)
- 4) **Ujjayi with a ratio of 1:1:1:0** (M.B. on the A.K.) x 6 rounds
- 5) **Natural Breathing** between rounds rest the breath
- 6) **Ujjayi with a ratio of 1:1:1:0** (M.B. on the A.K.) x 6 rounds
- 7) **Natural Breathing** always finish with natural breathing

*[Note:use JB also if count is above 10]*

This method means we prepare well for the more complex ratios and it also means students can stay at the correct level.

## Practicing Pranayama Ratios 2

If a medical condition is present and you are in doubt about the suitability of using kumbhaka then **always err on the side of caution.**

**Remember we are always seeking to become more conscious of the subtlety of the breath and must practice pranayama mindfully in a very relaxed way!**