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Pranayama Workshop

What is praanayama and why do it?

Pranayama is another yoga limb of the 8 limbs of Ashtanga Yoga.
Pranayama means expansion (ayama = extension or expansion) of our life force (prana). **Which means feeling Vitality, when pranayama is done correctly you feel freshness, energetic, and lightness in both body and mind.**

Pranayama is breathing exercises that increase absorption of prana and improve the distribution of it throughout our body.-- and advanced pranayama is actually a LACK OF breathing!

- Pranayama stimulates cellular breathing -- taking in O2 and giving off CO2. A sedentary person living in still air of an enclosed dwelling does not activate cellular breathing.
- Pranayama increases absorption and improves distribution of oxygen in our systems.
- In yogic terms pranayama increases our prana

What is Prana?

- Prana is our Vital Life Force - **That something that grows our hair and shines our eyes that science can not quite explain.** When we are filled with prana we are not just alive we have vitality.
  - **But we do have some science to put behind it. The negative ions in the atmosphere are akin to Prana. The negative ions are very active mobile ions -- in the atmosphere they work to keep our air clean. In our body negative ions take part in all vital functions and are the catalysts for oxygenating our blood.**

- **Prana is** Vitality, energy, Life.
  - Anything that is alive has prana. Anything that moves has prana.
    - Most people associate prana with breath -- prana moves in our breath--**we use our breath to take in prana, but our breath is not prana. We have prana in-utero before breathing, prana is more like the electricity the flows in our body.**

- Important source of vital prana is in our atmosphere, the air we breathe. So **we use breathing exercises to accumulate prana**

As long as we live we are prana conductors. Our prana needs to flow freely in our body, however it flows through channels or "wires" in our body -- our wires can get bent, blocked, or broken:
NADIS
Nadi means canal, conduit or tube. The nadis in our bodies are the conductors that our prana flows in. Many people refer to nadis as the nerves in our body, and the nerves certainly are conductors of prana but they are not the only conductors; the arteries, capillaries, and veins are

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also conductors of prana. There is also a relationship between the nadis of yoga and the meridians of acupuncture.

- The prana in the air in absorbed by our nose and with the air it passes into our lungs where it is absorbed by the blood. It can circulate with the blood in arteries, capillaries, and veins. Carried by the blood to the brain it can become the motor that drives the neurons and circulate as nervous energy along the nerves.

We do Asana to unclog the channels – Asanas precede pranayama, as in the ashtanga method outlined by patanjali, asana comes before pranayama. Asanas quicken the circulation of blood throughout the body, open up capillaries and enable prana to be distributed throughout our body without "short circuits".
In a body that is tight or blocked, pranayama may cause pranic disturbances. **Imagine a river that floods . . .** Asana practices keep our channels open.
(these disturbances have no long term consequences -- everything goes back to normal when you stop the pranayama).

- **Pranayama and breathing exercises accumulate and direct the prana in the newly opened channels :)**

Pranayama both is Scientific and Spiritual

Pranayama on a scientific level helps our body better "digest" the air we breathe. Many of us do not pay much attention to our breath, resulting in shallow breathing. **Shallow breathing does not oxygenate our tissues enough -- depriving us of oxygen and leaving us feeling drained of energy. Shallow and erratic breathing also disrupt the mind.**

- Our breath rate can be on auto pilot or can be controlled. We can not at will give orders to our liver, spleen or stomach but it is possible to regulate breathing at any moment. When our breath is left to subconscious control it is easily influenced by our emotions and what is happening around us, this sets off a chain reaction of stress responses in the body that are not favorable i.e. dry mouth, cold sweat, racing heart, this shallow breath slows down the digestive tract and diverts blood flow and body energy from our organs to fight or flight and stimulates the release of adrenaline. **By consciously controlling our breath and keeping it deep we set off a chain reaction which calms our heart and slows our pulses, helping the organs of the body operate efficiently.**

Pranayama techniques improve our breathing and breath awareness 24 hours per day, you breathe deeply not just when practicing asana or pranayama, but all day long. Pranayama establishes regular breathing patterns.

Pranayama:

- Increases lung capacity
- Removes toxins, the slower breath rate allows more time for CO_2 to be expelled
- Induces a meditative state

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- Mental activity correalates with our breathing pattern, more thoughts = more breaths and erratic breaths. **By reducing the number of breaths we take in a given period it makes concentration and meditation easier**
  - Pranayama is a tool for living in a meditative state where ease and happiness is easier.

- Increases our Life Span
  - The sages observed animals and noticed that animals with a slow breath rate such as elephants, tortoises, and pythons have a longer life span than animals with shallow breaths such as rabbits, birds, and dogs. From this observation they realized the importance of slow breathing for increasing our life span. Our respiration and heart are directly related, a slow breathing rate keeps our heart beat slower and stronger.

We do pranayama to reduce our number of breaths all day long
Pranayama can be as easy as slowing down your breath rate and breathing deeply and evenly as we do in our ashtanga practice. This is safe pranayama for anyone.

- **Ideal breath rate for our normal day is about 6 breaths per minute -- this is a 5 second inhale and 5 second exhale. Not difficult to do .... This breath rate gives more time for each cell in our body to expel CO2 and take in O2. Slower breathing also allows more time for prana absorption.**
  - Reciting mantra or prayers also slows down breath rate to about 6 breaths per minute.

****Real Pranayama****
Advanced pranayama techniques are actually a lack of breathing! Breath holding (khumbaka) -- holding our breath after inhaling (puraka), or exhaling (rechaka), or after both.
- Breath holding can either be beneficial or disruptive.
- Many years of asana are necessary to prepare the body for breath holding (as stated above).

<u>If you are not yet ready for a "real" pranayama:</u>
1. **Practice the style of loud breathing we do in our ashtanga practice** which was given the name Ujjayi Breathing is a good place to start.

   Ujjayi or Loud breathing where you use your throat muscles to slow down the passage of air into and out the lungs and where you use your bandhas or abdominals to get a deeper exhale has many great benefits:
   - Ujjayi lowers heart rate and blood pressure
   - calms our nervous system
   - reduces stress
   - increases psychic sensitivity
   - ujjayi alleviates fluid retention (due to the use of the bandhas with the breath the bandhas put pressure on our lymphatic system)

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Ujjayi is the pranayama which gives freedom from bondage; the sanskrit word means victorious. It is derived from the root "ji" which means to conquer or to acquire by conquest, and the prefix "ud" means bondage.

2. Pranayama without breath holds - 4 purifications -- SEE PAGE 16

If you are having a stressful day try 10 minutes of our yoga breathing to feel better in body and mind. This is some of the spiritual side of a pranayama practice. So is the exercise below.

WHEN TO START PRANAYAMA
KPJ would sit in front of you and put his thumbs in your lower abdomen (bandhas) to check to see if you were ready for pranayama . . .
In leiu of that . . .
Start Pranayama

- Only if you have a consistent practice
- After you have learned 2nd series and have been practicing both first and second for 3-4 years.
  - In the old days you would usually not learn pranayama until after you learned 3rd series, now in the new way ashtanga is taught since you are held back so long they have been starting you on pranayama after you learn all of 2nd.

When to / When to NOT practice pranayama

- After your asana practice, lie down take rest. Sit up and do pranayama. Then just walk away . . .
  - **Pranayama is best after asana practice but can be practiced other times**.
- Do pranayama on on an EMPTY STOMACH or 2 hours after food.
- NO Pranayama if ulcers or heart/lung diseases
- NO pranayama during menstruation -- energy needs to move down and out
- Practice pranayama 6 days per week. OK on moon days. **Pranayama needs to be consistent**!

HOW TO PRACTICE PRANAYAMA -- Incorrect pranayama will make you crazy!
SIT IN LOTUS!

- Lotus helps you keep your spine straight and keeps your legs from gettting jumpy
- Lotus position also reduces blood flow to our extremeties to benefit and circulate more blood through our heart and brain

NASAL & BREATHING AS IN OUR ASANA PRACTICE - **TAKE IN THE AIR!**
Nasal Breathing

- Inhaling and exhaling through your nostrils instead of your mouth filters and humidifies the air your breathe.

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- Breathing through your nose also turbinates the air you breathe taking it down deeper into lungs -- the capillaries in the lower lobes of the lungs have more O2 in them.
- The receptors for the Parasympathetic Nervous Systems are in the lower lungs, nasal breathing stimulates this part of your nervous system which is why deep breathing slows down your heart rate and reduces blood pressure. Where are breathing through your mouth keeps your breath shallow in the upper lobes of the lungs where the receptors to the sympathetic nervous system are located. Shallow breathing stimultes this part of your nervous system preparing you to fight or flight releasing cortisol and adrenaline into your blood stream.
- Using your glottis as in "ujjayi" slows down the passage of air to allow more time for gas and prana exchanges

TAKE IN THE AIR

When you are outside or practicing yoga or pranayama how you breathe can increase your prana absorption. Animals do this very well, have you ever noticed a rabbit breathing? Animals nostrils are very mobile and flexible and expand with each inhale — and so are the nostrils of humans that still live in nature such as tribes in Africa.

When we normally breathe our nostrils barely move — and sometimes they even pinch shut a little as the suction from inhaling tends to draw them inward.
So instead try to TAKE THE AIR, expand your nostrils as you inhale — notice how the air enters more easily, in greater volume, and in better balance between both nostrils.

Flare your nostrils as you inhale – Greater volume of air that is easier to inhale

- Breathing this way directs more prana over the ol factory nerve endings in our nose which take in prana from the atmosphere.
- Opening the nostrils during inhalation directs more of the air toward the area in our nose with the most sensitive nerve endings. The air current that enters our nose goes is divided into three streams — 2 of the directions are in and down, the third direction brings the air across our olfactory region at the top of our nasal cavity. This olfactory region — where our sense of smell is — is also the region of our nose that absorbs prana (the olfactory region is our prana accumulator).
- A purposely slowed breath, or when smelling something, or a rapid increase in the breath rate as we do for uth pluthi, or in the pranayama practices of bhastrika or kapalabhati all increase the flow of air to the olfactory region giving us the opportunity to absorb more prana

By flaring your nostrils slightly as you inhale you pull more air across this region of your nasal passages. You will notice that by taking in the air in this way makes breathing easier, harmonious, and well balanced. **Even if the change is imperceptible to you, it is not too optimistic to say that breathing this way increases the amount of inhaled air by 10%.**

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What to do if your nose is stuffy? There are 3 options you can try to clear the nostrils At the beginning the air current need not be the same on both sides -- only a severe blocking can prevent you practicing pranayama

- Neti – make it a daily habit

Three other options if your nose is stuffy:

- First, if your left nostril is clogged lie down on your right side and relax for 1-3 minutes -- and vice versa.
- Second, Find a spot on the back of your neck near the base of your skull and press on it with your thumbs -- use a gentle but firm pressure, with both thumbs somewhere on either side of your spinal colum.
- Third, Find a similar spot under your arm, place your armpit firmly on the back of a chair. If your right side is blocked place your left arm over the chair and vice versa. This spot will be easy to find as it is tender.

BANDHAS are important for pranayama. Not only do they improve your breath and help to move energy — **they are important to prevent thoracic pressure as we hold our breath. It is important as you hold your breath to keep the air in the upper portion of your lungs, if kumbhaka is done without bandhas it can put pressure on the intestines, appendix, or cause hernia.**

- Mula and Uddiyana Bandhas throughout
  - Bandhas not only protect the thoracic organs while breath holding, but also while deep breathing bandhas exert a slight pressure on the tissues just below our diaphragm where venous blood is collected. This pressure helps to support the movement of the venous blood upward toward our heart where it is circulated and refreshed with O2 and nutrients.
- **Jalandhara bandha on holds** -- most important on inhale holds and longer holds. "**Jalan" means net or network and "dhara" means stream or flow upward. It refers to the network of nerves and arteries in our neck.** Jalandhara bandha **prevents our amrita -- our nectar of life from flowing down and getting consumed in the fire of agni**.
  - Jalandhara bandha has many other benefits during pranayama:
    - Compression on the throat -- pressing of chin into the hollow in the collarbones:
      - prevents air moving upward and causing pressure above the glottis, this is important as pressure in the Eustachian tubes is not good.
      - puts pressure on the carotid artery which helps to keep our heart rate lower (when you hold your breath your heart rate speeds up).
  - The stretching of the cervical vertebrae at the nape of the neck pulls on the spinal cord relieving pressure on the cranial nerves and acting on the nervous system -- particularly the parasympathetic nervous system -- the part of our nervous system that de-stresses us.
  - Compression on the thyroid, helping to balance the action of the thyroid.

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Practicing sarvanganasana and halasana will help prepare one for jalandhara bandha, this is why many years of asana must precede pranayama and breath retentions.

- **HOW TO PERFORM JALANDHARA BANDHA** (if you have an overactive thyroid you shouldnot practice pranayam breath holding.)
  - Inhale, hold your breath, swallow your saliva, Lift your sterum and drop your chin into the notch in your collar bone. This is easier on inhale holds because the chest if lifted and expanded. On exhale holds do not force the bandha as it could strain your neck.

- **Tri-Bandha** – When all three bandhas are performed together they create a seal at either end of our spine keeping our energy in our spine and helping us to move it.

KUMBHAKA – Holding your breath
Breath retention = better distribution of prana throughout the entire body
As we get used to kumbhaka we can Direct prana where we need it at will in our bodies

RHYTHM is more important than how long you hold your breath! Our heart likes rhythm.

- The introduction of rhythm into work regulates it and reduces muscular and intellectual fatigue. This is why we love music :) If we have a good beat going we can work very efficiently.
- The duration of each breath has limited importance, rhythm is the decisive element. We tend to think of duration as the objective, but that has drawbacks . . .
- Long holds are inappropriate and will make you crazy . . .
- Our best rhythm is to our heartbeat

Breath Holding:

- Kumbhaka between 3-20 seconds
  - Accessible for everyone – to better utilize and digest inhaled air. We only use a small percentage of our inhaled oxygen. Tis is why we can save someones life with mouth to mouth resuscitation . . .
  - By holding the air in our lungs we increase the time the air is in contact with our pulmonary membranes increasing O2 absorption and makes CO2 evacuation more complete.

- Kumbhaka between 20-90 seconds will pronounce the above reactions even more.

- Kumbhaka beyond 90 seconds will put you in a pre-comatose state. Only to be done in the presence of a qualified "guru".

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- Placing your body in an unfavorable but non-fatal condition stimulates the creation of biostimulins --- biostimulins are what keep an organ alive when it is seperated from a human body and frozen to be re-implanted into another human body. This process actually stimulates the organism to regenerate in order to survive.
- Prolonged kumbhaka is physiological acrobatics and is not without danger. This is where pranayama is dangerous and can make you crazy or kill you ....

The most useful kumbhaka is between 30-60 seconds.

- While in kumbbhaka, breath holding causes the body to break down sugar to form O2 to compensate for the interruption from O2 from the outside. But CO2 rises since we are not exhaling.
- **Exhaling also releases heat from the process of cells taking in O2 and releasing CO2 -- intracellular combustion**. With the pulmonary radiator "disconnected" the body responds by asking for greater activity on the part of the skin which is why we get warm and sweat during pranayama. This explains why the yogi can stay warm in the colds of the himalayas with breath control. Yogis can manufacture their own heat when they need it ....

HOW TO HOLD YOUR BREATH
Here are some guidelines to hold your breath safely and effectively.

1. Spine should be kept straight during pranayama to allow the lungs to expand more fully and operate efficiently. Also pranic currents run through the marrow of our spine, keeping it straight makes the passage of energy and neurons smoother.

2. Mula bandha is important during pranayama -- especially during kumbhaka. As KPJ would say "contract your anus". This affects the perineum.

3. Pranayama needs to be performed on an empty stomach, if your pranayama precedes asana then your stomach is already empty. If pranayama is performed at a different time of day then the time lapse between your last meal and pranayama session will depend greatly on what you have eaten and how well you digest it -- this could take anywhere from 1-1/2 hours to 5 hours!
No real consequences other than a feeling of nausea which i experienced when teaching pranayama to someone shortly after i had eaten (i had already done my pranayama session earlier that day).

4. Slowly progressing is important. Performing holds too long too soon can leave you with a fever.

5. The most common error by beginners is to fill up the lungs too much thinking that will help them hold their breath but in actuality it is the O2 carried in the blood (not the lungs) that allows

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us to hold our breath comfortably -- whose saturation depends upon the previous breaths. This is why we take 5 complete ujjayi breaths between the pranayamas.

7. Listen to your heartbeat. Our best rhythm to hold is to our heartbeat.

8. Exhalations/Inhales after a hold should be slow and continuous.
   - NEVER FORCE a hold. It should feel comfortable and easy
     - Your exhale/inhale should be smooth and controlled. If you gasp you held too long, this will reslut in a LOSS of prana.
9. Focus on **Anja chakra** and on the **prana in your body**

10. Sweat should be rubbing in and not wiped off. It is full of Ojas (electrical energy).

CELLULAR HEALTH = Preventative Medicine!
After I got done explaining all this . . . someone asked "and what does getting our body better oxygenated really do for us?"

Filling your body with O2 and getting more O2 to your cells and tissues is preventative medicine at a CELLULAR level. Healing at the root of what could grow into a health problem.

Cellular Health depends upon 2 processes -- getting nutrients into a cell and toxins out.
- Oxygen plays a vital role in every metabolic process in our body. **Health depends on how efficiently nutrients can be absorbed and utilized at a cellular level**. Oxygen is what breaks down food in the cell turning sugar into energy, remember the Krebs cycle? I love how we are one with the universe :) Photosynthesis and Respiration are the same in reverse . . . Photosynthesis is a plant turning the Suns energy into Sugar, Respiration is the process of turning that sugar back into energy :)
- Healthy cells are aerobic -- meaning they have adequate levels of O2. When cells are deprived of O2 decay sets in and cells can mutate or die.
- **The primary cause of cancer is directly related to cells deprived of O2. Cancer cells are anaerobic and thrive in an oxygen-deficient environment.**

And the other side of breathing - the release of CO2. Health is also dependent on how effectively toxins and waste can be removed from the body.
- Cellular waste is removed from the body in several ways:
  - some is dissolved in water and transported to the kidneys or to the liver where it can be excreted in our urine or bowels.
  - **Some of the most toxic poisons in the body can only be "burnt up" and neutralized through oxidation. This is the job of O2 rich blood cells.** Have a good Pranayama session and "POOF" toxins gone ;)

Breathe deep and Oxygenate your cells while you burn up toxins :) This topic will be continued December 2012.