BWY AT THE HEART OF YOGA TEACHER

SUMMARY OF AREAS FOR CAUTION

ADVICE FOR YOGA TEACHERS

[Based on the appendix in Essential Anatomy and Physiology for Yoga by Dr Ruth Gilmore July 2011]

In the introduction Dr Gilmore says "Yoga by its very nature is both health giving and beneficial, but like any other activity there are areas where care needs to be taken. The following appendix is a non-exhaustive list of conditions commonly encountered in yoga teaching, rather than a definitive list of conditions. Areas where caution might be advisable, plus some suggestions for appropriate modifications in yoga practice also are provided in this section.

Yoga teachers need to be able to observe and listen to their students so that they can adapt each individual's practice accordingly. They also should have sufficient knowledge of the common medical conditions encountered in class to be competent in providing the advice and modifications that allow all students to get the maximum possible benefit from their practice.

Yoga practice is not designed to replace medical advice and treatment, but it can supplement prescribed medical treatment for many common conditions. If in doubt, ask the student to seek their doctor's advice before joining the class.

In asana practice, students should not strain to "win", or to try to achieve a specific end result. A balanced asana practice should move all the joints through their full pain-free range of movement.

Students should never "run out of breath" this raises anxiety levels and produces the opposite of the quiet mind that yoga is designed to induce. They should proceed at a pace that is comfortable for them.

Be aware that misguided attempts to adjust students in postures can cause injury – if verbal instruction does not help, the least possible physical indication should be used (e.g. a light touch on the shoulder to indicate that it should be rolled back). Always ask a student's permission before touching him/her."

Condition	Areas for Caution	Modifications
Anti-coagulant medication	See hypertension/coronary artery disease (CAD) below	See hypertension/CAD below
Anxiety	No asana prohibitions except if claustrophobic, then avoid pose of a child or similar "closed" postures	Encourage slow, easy breathing to include use of diaphragm to diffuse anxiety If closing the eyes provokes anxiety in an individual, say to the whole class that they may stay softly open
Arthritis is very common condition, especially as we age, where there is inflammation, pain & stiffness at the joints. There are several types the most common being osteoarthritis where the smooth cartilage lining of a joint thins and roughens, making the associated tendons and ligaments work harder, causing swelling & the formation of bone spurs; eventually bones may rub together, and the joint can change shape. Typically, this form occurs in knees, hips, hands & the spine. Conversely rheumatoid arthritis typically initially affects the smaller joints such as fingers and toes and is an auto-immune condition where the body's immune system targets joints causing swelling, pain and changes in shape.		
Inflamed joints should not be worked, but should be rested until inflammation dies down Work only in the pain-free range of movement No weight-bearing on painful joints No taking the head back in people with rheumatoid arthritis (risk of neck dislocation)		Try padding under knees, or kneel with folded blanket under shins so kneecaps are projecting just clear of blanket edge and weight is being taken on shins Place heels of hands on rolled blanket or make fists if wrists uncomfortable on hands and knees Moving-with-breath asanas better than strong static ones, but limit number of repetitions so as not to cause more inflammation Support hips in cross-legged poses if needed, with cushion under thigh(s). May need to straighten a leg if knee is affected, for instance in easy pose, or head to knee pose
Asthma is a common chronic condition where the airways (the bronchi) become inflamed and the production of phlegm increases. It can cause wheezing, chest tightening and breathlessness. There are many causes, and the severity varies greatly between individuals. During an attack generally exhaling is difficult.		

Avoid focusing on the breath (can increase anxiety in asthmatics) Asthmatic students usually manage their own condition (carrying and using an inhaler when needed) No specific asana prohibitions	Draw attention away from breath, esp. in beginners – focus on movement and sensations

Carpal tunnel syndrome is a common condition where the median nerve travelling through the carpal tunnel, a narrow passage in the wrist, is compressed, causing tingling, numbness and pain.

Avoid weight-bearing on painful wrists	Asanas on hands and knees – can try hands further forward on floor rather than directly under shoulders. Try rolled blanket under heels of hands or a wedge – both modifications reduce wrist hyperextension (painful in CTS). Can try making fist. If weight bearing is not possible at all in asanas on hands and knees, support on forearm(s) on floor or on stacked blocks. Can use wall such as elbows against wall for wall back stretch instead of dog head down.

Coronary Artery Disease	As for Hypertension (see below)	As for Hypertension (see below)
Depression	Avoid over-long relaxations, visualisations or yoga nidra. (these can pull mood down further) Avoid long static asanas	Shorter relaxation, visualisation, yoga nidra – no more than about 15 mins Include moving-with-breath asanas, rather than all static
Detached retina	As for Hypertension (see below)	As for Hypertension (see below)

Diabetes: There are two types of 1 & 2. Diabetes 2 is more common and is usually a condition associated with later life where the body does not produce enough insulin, or the body's cells do not react to insulin, so that glucose that isn't used a fuel for energy stays in the blood. The high blood sugar initially leads to thirst, tiredness and increased urination as the body tries to remove excess glucose. It can lead to long-term health problems such as blindness, kidney failure, cardiovascular disease etc. With regards to diabetes 1 this is an autoimmune condition where the body attacks the pancreas. It is often found in younger people, and here the pancreas does not produce any insulin so that initially there is usually weight-loss as the body breaks down its fat and muscle, plus tiredness, thirst and excessive urination. Diabetes 2 can often be controlled with diet whereas diabetes 1 usually requires insulin injections.

No specific asana prohibitions, but see below re risk of CAD Insulin-dependent class members usually manage their own condition (carrying glucose if needed) Be aware of the cardiovascular risk in **<u>all</u> diabetics past first youth** – high incidence of coronary artery disease (CAD) and arteriosclerosis, so avoid any physical or mental stress in practice		As for Hypertension (see below)
Faintness	Avoid long periods of standing still Advise students to eat a small snack not less than one hour before class Do not ask student to put the head between the knees – fainting can still occur in this position	Advise the student to lie completely flat. Raise legs above heart if props are available (this is not essential) Advise that the student remains flat until feeling well, and then comes up very slowly from lying down
Glaucoma is a condition where the optic nerve is damaged as fluid builds up within the front of the eye. This causes increased pressure within the eye and can lead to loss of sight if not diagnosed early enough.		
	As for Hypertension (see below)	As for Hypertension (see below)
Heart Attack	As for Hypertension (see below)	As for Hypertension (see below)
Hiatus Hernia is where part of the stomach is pushed up into the chest & protrudes through the diaphragm, often causing gastro-oesophageal reflux disease i.e. acid reflux.		
Avoid positions that take head level with or below stomach Prone postures may be uncomfortable for some Avoid strong twists and inversions (All the above encourage acid reflux and therefore heartburn or upper abdominal pain)		Supine postures – raise head and upper body above stomach level using cushions etc Alternative are needed e.g. cat-cow for cobra or cat balance for locust Legs-up-the-wall may be a suitable inversion if head/upper body raised as above Standing forward bends, take the hands to a chair

Hip Replacement **Need to know when done and how.** Can only be a general guide, advise the student to work within their comfortable range of movement, offering alternatives as needed. Older students may need a longer time for healing.	**For Posterior Approach:** No flexion past 90º for 6 months and limited flexion past 90º for a further 6 months No adduction for 3 months & limited adduction for a further 3 months. Avoid operated leg crossing the midline No internal rotation for 3 months and limited internal for a further 3 months **For Anterior Approach:** Limited abduction for 6 months Limited external rotation for 6 months Limited hyperextension for 12 months	Use Ardha Uttanasana (halfway standing forward bend) rather than the full asana. Sitting forward bends – use a belt round the foot/feet and lift spine rather than folding forward In Garudasana (eagle) use Vrksasana (tree) leg position. In Ardha Matsyendrasana (seated twist) do not take the operated bent-kneed leg across the straight one In Trikonasana (triangle) keep the operated leg toes pointing forward. Reduce distance between feet in asana such as Virabhadrasana II. Reduce range of external rotation e.g. blocks beneath thighs in cobbler pose. Reduce depth of hyperextension e.g. soft backbends, reduce stride in warrior I.

Hypertension (High blood pressure)/Coronary Artery Disease (CAD)/Angina to also include: Anti-coagulant medication, Detached retina, Glaucoma, Heart Attack, Mature Diabetic

Be aware of:

- **Increased intra-thoracic pressure** such as we get in inversions as it is harder to breathe against the weight of internal organs, heart works harder against pressure, BP rises
- **Heart pumping against gravity** such as where limbs are held overhead as heart works harder to circulate blood, BP rises
- **Strain** as when effort becomes strain the fight or flight mechanism of SNS is activated and BP rises to handle the 'emergency'
- **Held or uneven breathing** as BP rises when the body needs metabolism to continue for energy but holding the breath ultimately diminishes the supply of available energy
- **Excess heat** as it when we sweat the electrolytes (sodium, potassium, calcium) needed for the muscles to work are depleted meaning muscles including the heart work must work harder

Coronary artery disease and angina – avoid strong increases in BP, resting as needed, physical practice should not result in angina pain – if it does it is too strong for the individual.

Students on warfarin (anti-coagulant medication) should avoid inversions and sustained head down positions as these can increase the risk of troublesome nose bleeds and might raise risk of stroke. Warfarin can be prescribed after heart valve replacement or DVT, and for some heart arrhythmias.

Any student who has had "open heart" surgery (valve replacement, coronary artery bypass etc.) may have subconscious fear of postures that "open the chest/heart".

Avoid strong static work	Favour moving–with-the-breath asanas over static ones. Do not forbid static asanas, but only stay in them a short time, resting as needed.
Avoid holding arms above head for long periods	Arm-raising is OK if done as part of moving-with-the-breath work, otherwise if staying in a pose modify with arms kept lower
Avoid head below heart for long periods	Head below heart is OK if done in moving-with-the-breath work, otherwise modify if staying e.g. • Child's pose: cup face in hands, elbows to floor/block under forehead • Standing forward bend: stay half-way, using support if necessary • Down dog: hands to wall
Avoid inversion e.g. headstand and shoulderstand. This also applies to people whose HBP is controlled by medication, **unless under 30 years old** as in older people the high BP is usually associated with arteriosclerosis, which makes arteries more vulnerable to damage, including in the brain. This can increase the risk of stroke.	Substitute legs up the wall, with restful breathing For heart operations be aware of use of language – don't say "chest/heart-opening postures" as the phrase has a literal meaning to this group….

Hyperventilation and Panic Attacks	Have an "open door" policy – inform the class that students are always free to leave the room and return whenever necessary, for any reason Avoid focusing on the breath if this encourages hyperventilation	Instruct a hyperventilating student to "pause the breath" for as long as is comfortable, then to breathe for a few moments, then repeat. Or use slow abdominal breathing Ujjayi is helpful if the student knows how to do it before the attack Encourage awareness of "the witness within", i.e., become able to observe what is happening to the body in an objective way Take a private opportunity to explain to the student how the "Fight & Flight" reaction affects the body and mind, and that in a panic attack this otherwise normal response to danger is being triggered inappropriately by a (usually subconscious) thought. Understanding what is happening can defuse the attacks

Hypotension (Low blood pressure)	Avoid standing still for any length of time (risk of fainting) Avoid coming from lying to sitting/standing, or from sitting to standing too quickly (risk of light-headedness or fainting)	Instruct student to rhythmically contract and relax calf muscles in static standing asanas (helps maintain venous return to the heart) Advise pausing for a couple of breaths half way when coming up from a standing forward bend Advise the student to move slowly from lying or sitting position to standing
Knee problems	Avoid movements that cause any pain Avoid kneeling if not possible to modify comfortably	Place block(s) between hips and heels in Vajrasana Try a folded blanket under shins with knee caps projecting over edge (see modifications for arthritis above)
Knee Replacement	Most replacements do not allow full flexion (bending). Avoid sitting back on the heels or full Vajrasana (thunderbolt pose) Some replacements do not allow kneeling on the operated side	Some students may be able to sit back with two or more blocks between the hips and the heels Some students may be able to use the modifications described above in "knee problems". If not, have an alternative asana ready that the student already knows when the class is using a kneeling posture
Lower back problems	Prolapsed (herniated) disc – avoid forward bends for 3-6 months Avoid any movements that cause pain Avoid straight leg raising if sciatica is a problem	Gentle backbends can be helpful, but need to be explored gently Bend knees to release compression in spine in forward bends. For seated forward bends can sit on blocks, can use a belt to reduce flexion forwards. Can be helpful to forward bend on to a support. In Savasana keep feet to floor and for supine poses in general can help to keep a foot or feet to floor. For students diagnosed with nonspecific back pain a general balanced practice is often helpful taking softer options as needed

Menstruation	No prohibitions as such However, some individuals may find that inversions disrupt their flow and energetically this may be due to apana vayu moving in the wrong way: if so, avoid during menstruation	Inversions are not advised against for any physiological reason. But if the flow is heavy it may cause embarrassing "flooding" when coming out of the posture. Also, energy levels are low at this time so it is normal not to wish to practise strong asanas
Neck conditions, Spondylosis ("wear and tear"), Arthritis Whiplash	Avoid strong inversions –headstand and shoulderstand Avoid any postures that cause pain Students with rheumatoid arthritis should avoid taking the head back – unstable neck joints Students with Down's syndrome – avoid <u>all</u> full neck movements – upper neck joints are unstable Whiplash – soft tissue injury in neck region – can leave long-standing emotional "guarding" of the area. Avoid mentioning "neck" as sufferers are too aware of it	Spondylosis (wear and tear) in the neck – sufferers should use the full pain-free range of movement regularly Keep head in line with trunk in postures where the head is normally taken back Keep head in neutral position as much as possible: for instance in Trikonasana stay aligned looking forwards or down. Remind whole class to relax shoulders, face- i.e. areas surrounding neck, with time the neck will relax also, releasing muscular tension
Obesity	Avoiding strong inversions is probably good advice for most obese people Folded blanket under midriff (solar plexus area) helps to relieve pressure on large breasts in prone postures Child pose – cup chin in hands, elbows on floor if head closer to floor impedes breathing	Legs up wall as a substitute for other inversions Belt around knee(s) if supine student cannot bring knee(s) to chest
Osteoporosis	Avoid headstand and shoulderstand, strong twists, jumping into/out of postures Care with all neck movements. Avoid full forward bends and strong spinal twists as these load high compressive forces on vertebrae	Use legs up wall instead of stronger inversions Use gentle twists, forward bends to a chair, or use a belt around foot/feet in sitting forward bends and focus on developing spinal length Step feet out/in rather than jumping.

Pacemakers (implanted)	No specific precautions	No specific modifications
Recent abdominal surgery	Do not return to class until at least 2-3 months after surgery	Avoid postures needing strong abdominal work for about 6 months, e.g. navasana (boat pose), any supine straight leg raising, etc.

Sacro-iliac Strain: This can be attributed to a mechanical slippage between the sacrum and ilium causing injury & inflammation to the ligaments crossing these joints. It is often experienced as pain around the SI Joint, often a coin sized pain on one side just above the buttock. The pain can radiate into the hip socket & down the outside leg, however we may experience pain on the opposite side than the actual injury. The joint may need to be relocated & it takes time for sacroiliac ligaments to heal.

If there is a flare up with pain present, avoid asymmetrical asana or any that cause pain or discomfort, especially standing twists. Also, if there is a flare up strong hip openers where there is a subtle opening at the pubic bone such as cobbler or seated spread leg pose should be avoided, or aids used such as blocks under thighs for cobbler or flexing onto a support for spread leg. Generally, take care in all asymmetrical asana where the sacrum and hips can move in opposite directions, ensuring they move together e.g. in seated twists have a blanket under buttocks to allow the sacrum and hip bones to move as one.	Care in side-bending asana which may require students to drop top hip and reduce their stance Care in spread leg poses and also more specifically for forward bends For forward bends ensure the pelvis and ilium bones move together so we flex at hips; we may need to avoid or modify asymmetrical forward bends such as head to knee pose, where we can reduce the angle of the bent leg, place blocks under the bent thigh or bend the straight leg; or for flank stretch we can bend the front knee, reducing the distance of the stance. Generally, when pain free gradually re-introduce twists, side bends and forward bends and until this time they can be avoided or modified.

Sciatica The sciatic nerve is the longest & widest nerve of the body, running from the low back, through the pelvis and down the back of each leg; when compromised it causes pain, tingling & numbness radiating down the legs into the feet, although associated pain may also be experienced in the lower back, hips and buttocks.

- It may be caused by impingement of the sciatic nerve in the lower back through a herniated disc, through degenerative arthritis, or pressure created by pregnancy.
- We may also see spinal stenosis in later life (after around 60 years) where there is a narrowing of the spinal canal through natural wear & tear.
- It is also possible that the sacroiliac joints when inflamed can create sciatica, which can be caused by injury, pregnancy, arthritis or infection.
- Alternatively, there may be impingement of the sciatic nerve by the piriformis muscle, a deep hip rotator within the pelvis, known as piriformis syndrome.

As there are different causes students will have to try different modifications and use of aids until they find the way to practice that is most helpful. This is usually linked to lower back conditions.

See Lower back problems	See Lower back problems
Upper back problems: Kyphosis is where the thoracic region of the spine has a very pronounced curvature (+45º) often due to poor posture or aging.	
Avoid strong back bends in permanently kyphotic spines, and in students with ankylosing spondylitis (an inflammatory arthritis of the spine)	Place block or padding under head and neck region if chin lifts towards ceiling when supine Gentle backbends are helpful for ankylosing spondylitis Care in twists that we twist equally throughout whole spine so we do not jam the spine above & below the less mobile thoracic region.
Varicose veins are created when valves within the veins of the legs that normally prevent the backflow of blood are weakened or damaged. This causes blood to pool in the veins so they become swollen & enlarged.	
Avoid sitting positions that are uncomfortable (varies with individual and which veins) Avoid Virasana/Supta Virasana	Sitting on a block with legs out in front instead of cross-legged position or Vajrasana, kneeling if comfortable. For Vajrasana can place a block between buttocks and heels

This is largely common sense and over the coming months we shall look at various common conditions so you can build up a more in-depth understanding of the different conditions. For all conditions however:

- Students need to develop an understanding of the purpose of asana, appreciating that this is not a gross practice simply working on muscles, where potentially if we push too hard with the mind and body we are straining the nervous system and exhausting ourselves; rather that we need to practice with full awareness of the body and breath to our current capacity, focusing upon the releasing of effort at our 'edges' and in this way we can harmonise the systems of the body, balance the nervous system, increase free flowing energy and calm the mind. Knowing that when we practice with such intimacy our capacities will also naturally grow.
- Students need to be mindful that their breath remains smooth & even as this is an excellent feedback tool; if the breath becomes ragged in any way then it is a sign that they need to ease back.
- Students need to be aware of signs of discomfort or overworking such as trembling or sweating
- We need to provide good pointers for students to check against their own experience, providing suitable modifications, the use of aids and possible of alternative practices as needed.