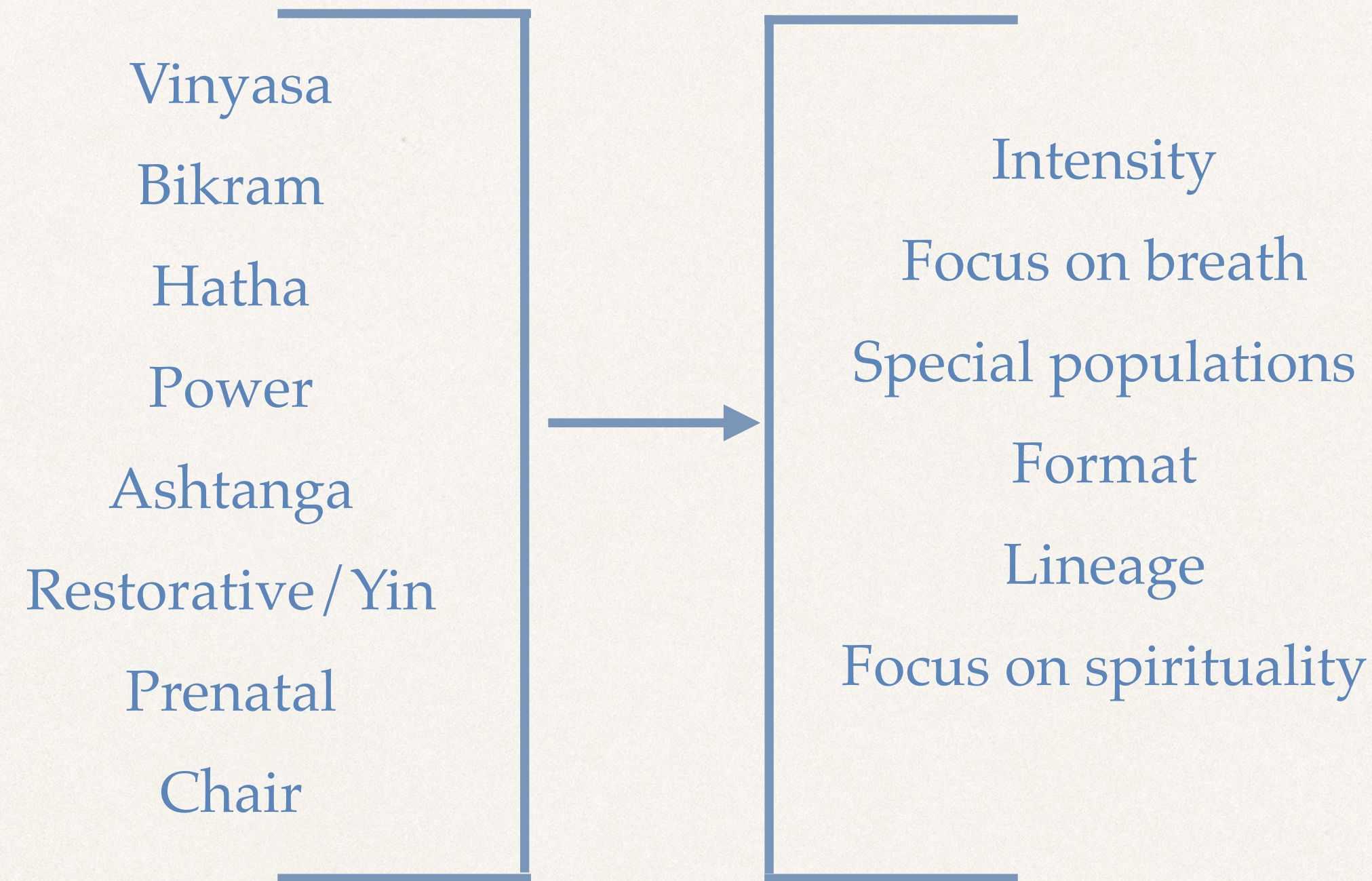


Stress Management: A Focus on the Breath

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Yoga is more than instagram photos of beautiful people in impressive poses...



- ❖ Everyone can do yoga, everyone can receive its benefits

Yoga can be stillness...



- ❖ Sanskrit: *Union* or *connection*
- ❖ *Asana*, or postures, as a way to calm the mind.
- ❖ *Yogas citta-vrtti-nirodhah*; Yoga is the stilling of the changing states of the mind (Yoga Sutras of Patanjali, 1.2)
- ❖ Asana is just one of 8 *limbs of yoga*

The Stress Response: Sympathetic and Parasympathetic Systems



Lewa Conservancy, Kenya

Yoga, breath and meditation can shift stress-responsive biomarkers

- ❖ Resonant (deep) breathing: shift towards parasympathetic functioning (Brown & Gerbarg, 2005; Gerritsen & Band, 2018; Russo et al., 2017)
- ❖ Increases in parasympathetic nervous system activity; decreases in sympathetic activity (e.g., Pascoe et al., 2017)
- ❖ Better regulation of cortisol (e.g., Pascoe et al., 2017)
- ❖ Decreases in inflammation (Bower & Irwin, 2016; Buric et al., 2017; Djalilova et al., 2019)

Meditation and yoga can improve outcomes in stress-related health conditions & stress-sensitive behaviors

- ❖ Cardiovascular disease (reviewed in Kanmanthareddy et al., 2016)
- ❖ Depression (e.g., Cramer et al., 2013; Zou et al., 2018)
- ❖ Anxiety (e.g., Chen et al., 2012; Hofmann et al., 2016)
- ❖ Improvements in sleep quality (e.g., Kanen et al., 2015; Rusch et al., 2019; Wang et al., 2020)

Meditation, Yoga & the Pandemic

Mental health & COVID-19 pandemic

- ❖ Higher rates of depression and anxiety symptoms, suicidal ideation (CDC, 2020)
 - ❖ Symptoms higher for those with pre-existing mental health conditions, greater exposure to media, and more secondary stressors (Holman et al., 2020)
- ❖ Google searches for worry, anxiety increased during pandemic (Hoerger et al., 2020)
 - ❖ Online therapist searches and techniques to treat anxiety also increased (deep breathing, body scan meditation)

Yoga, meditation & COVID-19

- ❖ Very little empirical data now on yoga / meditation and COVID-19 outcomes and pandemic-related coping → pre-registered trials published so studies are underway

Yoga, meditation & coping with the pandemic: Emerging findings

- ❖ Free tele-yoga program (sessions offered 2x per day, 5 days / week, 4 weeks); 54 participants consented to a research study (Jasti et al., 2020)
- ❖ Declines in stress levels during the month of the program
- ❖ Correlation between number of sessions attended and declines in perceived stress

Yoga, meditation & coping with the pandemic: Emerging findings

- ❖ 58 Italian teachers participated in an 8-week mindfulness course (pre-post design): baseline assessment prior to the pandemic, program continued during the lockdown (Matiz et al., 2020)
- ❖ Decrease in depression, anxiety, and emotional burn-out; increase in psychological well-being
- ❖ Some evidence of greater improvement among those lower in resilience

Broader findings: Yoga, meditation and burnout

- ❖ Study of nurses and other health care professionals (Hilcove et al., 2020): random assignment to mindfulness-based yoga or control condition
 - ❖ Improvements in mindful yoga group compared to control for burnout as well as perceived stress, vitality, sleep and mindfulness
- ❖ 94 individuals on sick leave due to burnout randomly assigned to yoga, mindfulness based cognitive therapy, or cognitive behavioral therapy (Grensman et al., 2018)
 - ❖ All groups showed improvements on domains of burnout (e.g., emotional well-being, physical well-being, sleep, cognitive function)

Taking a break, taking a breath: Chair yoga

Chair yoga sequence

- ❖ **Side stretch:** Raise arms up, interlace fingers, palms to ceiling. Breathe. Bend over to the right (hold 2 breaths). Come up to center, bend to left (hold 2 breaths). Come back to center, release hands to lap (repeat if you would like).
- ❖ **Twist:** place left hand on right knee, right hand behind hips. On the inhale, sit up tall, extending the spine. On the exhale rotate to the right. Repeat 3 times on right, then switch sides.
- ❖ **Neck rolls:** Drop right ear towards right shoulder. Slowly roll neck so chin faces down. Roll to left (left ear towards left shoulder). If you would like, place left hand by right ear, gently applying pressure to intensify the stretch. Repeat on the other side.
- ❖ **Seated cat/cows:** Sitting up tall, hands on knees. Inhale, raise collarbone up, gaze towards ceiling. Exhale, round the spine, chin towards chest. Repeat 3 times. Can bring circular movement to the sequence if desired.

Chair yoga sequence

- ❖ **Seated figure 4:** Cross the right ankle over the left knee. Sit up tall, and lean forward in your chair, stretching the right hip. Hold for 3-5 breaths, repeat on the other side.
- ❖ **Seated triangle:** Separate the feet a little wider than hip distance. Place right elbow near right knee, then extend left arm on a diagonal towards the ceiling, stretching through the left chest. Hold for 3-5 breaths, repeat on the other side.
- ❖ **Forward fold:** Place feet a little more than hips distance apart on the floor. Gently fold forward over the legs, holding on to opposite elbows. Hold for ~3 breaths, switch the grip of the elbows, ~3 more breaths. Return to a seated position.