

Asana for Runners

200 Hour Prairie Yoga Teacher Training

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Abstract

Runners experience tightness, soreness and imbalance in their bodies as a result of their sport. After participating in four yoga classes, concentrating on stretching and strengthening the hips and thighs, the core, the feet and lower legs and the upper body, employees of the Naperville Running Company reported that yoga positively affected their flexibility, breathing, balance, physical and mental stamina, and posture while running. Furthermore, participants reported that they would be quite likely to add yoga to their training regimen once per week.

Research

Introduction

As a result of repeated forward physical movement in their sport, runners face unique challenges. From tight, weak or over-toned muscles to pain, inflammation and injury, runners experience the aggravation of imbalances in their bodies. In addition, many runners push themselves to achieve, focusing on ways to lengthen their stride and increase their speed and stamina and breath efficiency. While they may achieve these goals, runners often sacrifice breath quality, muscle flexibility and overall balance in the process. Yoga attempts to correct these issues through unification of the mind and body, leading to wholeness, balance and harmony. Yoga teaches runners how to move appropriately to enhance performance and reduce injury.

Effects of Running on the Physical Body

Most challenges runners face stem from imbalances in the body. For instance, weak abdominal muscles cause the body to wiggle with each stride, irritating the muscles of hip and IT band. In contrast, overdeveloped abdominal muscles pull the ribcage down, collapsing the chest and limiting lung capacity. While the chest is collapsed, the muscles of the back lose tone. Weak back muscles lead to a hunched posture, which restricts breathing. And if a runner's front and back core muscles are weak, the legs will suffer. Similarly, an imbalance between front and back leg muscles leads to an overuse of opposing muscles, which can inflame tendons. Tight hip flexors can pull the pelvis forward, putting stress on the hamstrings and lower back, leading to

incorrect posture and lower back pain. Finally, misalignment in the feet necessitates compensation by the knees or hips.

Runners also face specific injuries, which can include:

- **Piriformis Syndrome:** Running on uneven ground or having tight hamstrings overtax the piriformis muscle which aggravates the sciatic nerve, causing throbbing pain that shoots up the spine or down the legs.
- **Achilles Tendinitis:** Under too much stress, this tendon, which connects the calf muscles to the back of the heel, becomes tightened and irritated.
- **Runner's Knee:** Also called patellofemoral pain syndrome, repeated bending of the knee can irritate the nerves of the kneecap. Overstretched tendons, flat feet or weak thigh muscles may also cause pain around the knee.
- **Hamstring Issues:** The muscles that run down the back of the thighs bend the knees, extend the legs and help increase speed. So when the hamstrings are too tight or weak, discomfort or pain results and performance suffers.
- **Plantar Fasciitis:** With each step, a runner's feet absorb a force several times her body weight. When small tears or inflammation occur in the tissues from the heel to the toes of the foot, the runner experiences an ache along the arch or bottom of the heel.
- **Shin Splints:** Medial tibial stress syndrome is an achy pain that results when small tears occur in the muscles around the tibia.
- **Iliotibial Band Syndrome (ITBS):** During a run, the knee flexes

and extends, which causes the IT band (a tendon on the outside of the thigh from the hip to the knee) to rub on the side of the femur. This can cause irritation during and after a run.

Benefits of Yoga for the Runner

Yoga gives the runner increased control over his body. Stretching in yoga increases joint mobility, provides for full contraction of opposing muscles, aligns and balances the body, increases body efficiency and decreases the possibility of injury. Dynamic stretching increases flexibility and smooth, healthy range of motion at the joints. With longer holds in static yoga stretches, the fascia also stretches. With hip-opening postures, for instance, runners can target some of the most constricted areas including the gluteus muscles, the IT band and the hip flexors.

Yoga poses challenge the core, leg, hip and thigh muscles in ways that running doesn't and help minimize muscle imbalances that may lead to injury. For instance, strength and openness in the upper body helps flex elbows and hold shoulders open and steady so arms can swing without excessive twisting of the shoulder girdle from side to side. Likewise, a strong core creates stability so the runner's limbs can freely move in space. And runners with strong legs tend to slightly favor one leg, so working the legs independently through asana can help balance strength.

Moving slowly and mindfully through yoga postures develops more synchronicity between breath and movement, which will increase

efficiency of movement while running. The runner can develop a more steady and even flow of oxygen to the legs and lungs which helps her feel more energized and move more fluidly when running at a higher intensity. Being mindful of the breath also aids with training by fostering recovery, teaching the runner to relax. In addition, breathing exercises strengthen the diaphragm, which helps support the spine as well as stretching the intercostal muscles, expanding the chest and creating more space for the breath during runs.

Increasing blood and oxygen flow to muscles, tendons and ligaments also boosts flexibility, reduces soreness, and speeds recovery. Runners can use asana to target their tightest and weakest spots, improving range of motion and strength to keep muscles and joints healthy. And as a bonus, they develop balance, core strength, and focus. And developing that mental focus during asana increases mental endurance on the road. With enough practice, runners can stay focused when they start to tire in the race. "Yoga helps me control my emotions while I'm in discomfort on the road. Enduring an intense pose is a lot like enduring a long run or tempo run" (Van Allen).

Benefits of Specific Asana

Tadasana	Stretches legs, steadies breath.
Vrksasana	Opens hips and groin. Steadies nerves.
Trikonasana	Stretches and strengthens feet, ankles, knees. Opens hips and chest, elongates spine.
Virabhadrasana 2	Strengthens back and legs, develops strength and stamina, groin stretch.
Parsvakonasana	Stretch legs and sides, opens hips and stretches groins.
Parsvottanasana	Excellent stretch for entire body. Shoulder and wrist flexibility, legs and hips stretched.
Virabhadrasana 1	Opens chest, strengthens knees and stretches ankles and calves.
Parivrtta Trikonasana	Relieves lower back discomfort, stretches and strengthens legs and increases flexibility in hips.
Ardha Chandrasana	Stretch groins and hips. Strengthens ankles, lengthens spine. Balance.
Virabhadrasana 3	Balance. Adds energy and agility.
Hasta Padangusthasana	Strengthens and stretches legs, balance.
Utkatasana	Strengthens ankles and thighs. Develops knee muscles for added support.

Virasana	Relieves leg fatigue.
Supta Virasana	Stretches psoas and aligns feet, lets, thighs.
Baddha Konasana	Stretches inner legs, increases mobility of hips.
Anjaneyasana	Groins and upper thighs
Ardha Padmasana	Stretches hips and knees, strengthens ankles and back.
Natarajasana	Stretches knees, thighs and groins. Strengthens back.
Chaturanga Dandasana	Strengthens abdominals.
Adho Mukha Svanasana	Stretches entire back body, especially hamstrings, calves and Achilles tendons. Strengthens upper body, opens chest.
Inversions	Improves circulation. More nutrients absorbed, wastes are discarded more efficiently. Blood flows freely to heart, brain and lungs.
Sitting forward bends	Humility. Elongates and strengthens front body and back body equally. Stretches legs, stimulates internal organs.
Twisting	Releases tension and increases flexibility in spine. Relieves lower back pain.
Savasana	Nervous system needs frequent rest. Eliminates fatigue as respiratory and circulatory systems decrease lactic acid in muscles. Releases tension.

Participants

In order to experience the results of the four sequences on my own body, I began running longer distances. Two weeks before the first class, I started running three miles, three times per week, continuing this running schedule throughout the duration of the study.

Participants reported running an average of twenty-three miles per week, with a range of six to fifty miles per week. Participants reported a range of previous yoga experience, from no yoga experience to a sampling of yoga in the past. No participants practiced yoga consistently. All participants considered themselves in good shape. However, participants reported the following challenges: tight hip flexors, back and hip pain and neck pain. Several employees lamented that they only ran for fitness, and they would like to include cross-training in their weekly routine.

Six participants were male. Twelve participants were female. Ages of participants ranged from fourteen to fifty-eight years old.

Participants reported that they hoped to gain flexibility, strength, muscle awareness and peace of mind from practicing yoga.

Method

One employee of the Naperville Running Company participated in the full series of four yoga classes. Five employees attended between two and three yoga classes. Twelve employees attended only one yoga class. Classes took place on Saturday mornings in the main salesroom,

including a recycled rubber track with front benches for support. Each participant had a yoga mat, a block, an eight-foot strap and a squishy ball.

Session #1: HIPS and THIGHS

Session #2: CORE

Session #3: LOWER LEGS and FEET

Session #4: UPPER BODY

Before practicing, participants were instructed to be attentive to their bodies and breath, moving slowly into and out of poses and inhaling and exhaling through the nose. They were also encouraged to honor their body through awareness and noncompetition, balancing persistence and energy with gentleness and non-harming.

Conclusions

Thirteen participants turned in post-program evaluations with the following results:

1. Runners felt that yoga had not much effect on their running **speed**.
2. Runners felt that yoga had a slight effect on their **breathing** while running.
3. Runners felt that yoga had a slight effect on their **muscle tone**.
4. Runners felt that yoga had a positive effect on their **flexibility**.

5. Runners felt that yoga had a positive effect on their **mental stamina**.
6. Runners felt that yoga had a positive effect on their **physical stamina**.
7. Runners felt that yoga had a positive effect on their **balance** while running.
8. Runners felt that yoga had a positive effect on their **posture** while running.

Based on their Yoga for Runners experience, participants reported that they would be quite likely to add yoga to their training regimen once per week.

Participants shared the following comments about the program:

- “It was great for flexibility and relaxation.”
- “I think it WILL benefit my running once I can go more consistently. I can’t wait.”
- “Yoga will benefit me. I just need to practice.”
- “I’m feeling totally relaxed at work even on busy days.”
- “I felt ease during the rest of my day which in turn improved my runs.”
- “It was new to me, and I feel that it did help me with my racing.”
- “I believe it helped my flexibility, so I continue to do yoga after long runs.”
- “It was a great way to start my day. I was more peaceful, calm and relaxed.”
- “Yoga increased my strength, flexibility and benefitted my cross-training. It calmed my mind.”

Resources

1. Interview with Aaron Wachter, nine-time Chicago Marathon finisher, Naperville, March 2013
2. Interview with Kate Mason, Yoga Instructor at Abhyaasa Yoga, Naperville, January 2013.
3. *Prairie Yoga Teacher Training Manual: 200-Hour Foundation* by Lori Gaspar. Lori Gaspar, 2012.
4. *The Runner's Guide to Yoga: A Practical Approach to Building Strength and Flexibility for Better Running* by Sage Rountree. Velopress, 2012.
5. RunnersWorld.com:
 - “Double Feature” by Sage Rountree. November 22, 2010.
 - “Get Strong Legs” by Christie Aschwanden. January 2, 2007.
 - “Iron Poses” by Sage Rountree. August 3, 2012.
 - “The Big 7 Body Breakdowns” by Christie Aschwanden. February 3, 2011.
 - “The End Game” by Sage Rountree. January 20, 2012.
 - “Yoga for Runners” by Sage Rountree. October 14, 2010.
6. *The Runner's Yoga Book: A Balanced Approach to Fitness* by Jean Couch. Rodmell Press, 1990.
7. *Scientific Keys Volume One: The Key Muscles of Yoga* by Ray Long. Bandha Yoga, 2006.
8. SparkPeople.com:
 - “How Yoga Can Help Your Running” by Jennifer Van Allen.

December 14, 2012.

- “13 Yoga Poses for Runners” by Stephanie Romine. No date.
9. WebMD.com “Knee Pain Health Center: Runners’ Knee” by Jeffery Beitler. January 25, 2012.
 10. *The Yoga Deck: 50 Poses & Meditations for Body, Mind & Spirit* by Olivia Miller. Chronicle Books, 2001.

Sequence #1: Naperville Running Company

Intension: strengthen and stretch muscles of the HIPS AND THIGHS

Props: 1 strap, 1 block

Virasana > use block

Centering > **Anapana**

Neck and spine stretches, gentle twists

Balasana > add breath with heart opener (table top)

Adho Mukha Svanasana

Teach then breath work > **Uttanasana**

Tadasana

Utkatasana

Anjaneyasana

Virabhadrasana 1

Virabhadrasana 3

Breath work > half salute to transition to other side

Anjaneyasana R/L > hold and add twist

Adho Mukha Svanasana

Virabhadrasana 2

Parsvakonasana

Trikonasana

Breath work > half salute to transition to other side

Gluteus medias dips > use block and wall (greater range of motion; longer strides)

Vrksasana

Standing #4 Pose

Adho Mukha Svanasana

Eka Pada Rajakapotasana

Dandasana

Janu Sirsasana > use strap

Maricyasana 3

Supta Baddha Konasana

Savasana

“I rise to meet life’s challenges with calm and confidence.”

Sequence #2: Naperville Running Company

Intension: strengthen and stretch muscles of the CORE

Props: bench or chairs in front of mats, 1 block

Siddhasana > sit on block

Centering > **Ujjayi breath**

Neck and spine stretches, gentle twists

Table Top > extend arm and opposite leg (balances)

Parighasana

Adho Mukha Svanasana

Uttanasana

Tadasana

Breath work >

Adho Mukha Svanasana

Plank

Vasisthasana

Bhujangasana

Adho Mukha Svanasana

Walking Dolphin (inhale and tiptoe closer, exhale and tiptoe back)

Transition to standing

Ardha Chandrasana 2 > use bench for front hand support

Anjaneyasana > use bench for hands

Transition to floor (prone)

Salabhasana

Dhanurasana

Transition to supine

Purvottanasana

Navasana > add twist: pick up block on side then place on other side. Repeat.

Jathara Parivartanasana with bent knees

Savasana

“My body and mind are grounded and balanced.”

Sequence #3: Naperville Running Company

Intension: strengthen and stretch muscles of the LOWER LEGS AND FEET

Props: 1 block, 1 squishy ball

Sukasana > sit on block

Centering > **Samavrtti**

Neck stretches

Breath work > gentle spinal twists

Breath work > **Table Top** to **Balasana** to rise up (learning Chandra Namaskara)

Foot Spa (from Linda Troutman)

- Thread fingers between toes and rotate, toe bends
- Standing: Heel/toe lift (block between thighs)
- Wall > ball rolls, toe smears with block
- Mat > **Broken Toe** (start in table top with block)

Adho Mukha Svanasana

Uttanasana

Utkatasana

Tadasana > teach toes up

Virabhadrasana 1 R (focus on grounding back heel)

Anjaneyasana

Adho Mukha Svanasana

Virabhadrasana 1 L (focus on grounding back heel)

Anjaneyasana

Uttanasana

Tadasana

Malasana

Chandra Namaskar

Virasana variations (on block) > **Eka Pada Virasana** (good for shin splints)

Dandasana

Ardha Matsyendrasana

Savasana

“My actions are purposeful and my thoughts are clear.”

Sequence #4: Naperville Running Company

Intension: strengthen and stretch muscles of the UPPER BODY

Props: 1 block, 1 strap

Virasana > sit on block and strap upper torso into parachute

Centering > **Anapana**

Sukasana > Yogic Breathing

Teach lifting four pillars

Shoulder Openers > switch leg cross, use strap with tension between hands

Gomukhasana arms > use strap

Cat/Cow > thread needle

Balasana

Adho Mukha Svanasana

Uttanasana

Tadasana

Virabhadrasana 1 > focus on opening and lifting

Virabhadrasana 2

Parsvottanasana (grab elbows, open chest)

Tadasana

Garudasana

Breath work >

Inhale: **Astangasana**

Exhale: lower

Inhale: **Bhujangasana**

Exhale: **Balasana**

Inhale: **Table Top** (press heart forward)

Exhale: **Adho Mukha Svanasana**

Bakasana (use block for back toes)

Purvottanasana

Bharadvajasana > use block for back hand or bind

Setu Banda Sarvangasana > focus on shoulders, grab sides of mat

Savasana

“I am confident, focused, balanced and secure.”

Participant Questionnaire

Naperville Running Company

April 2013

Please complete the following questions BEFORE participating in yoga sessions.

1. Your Age _____ Sex : M F

2. Please describe your current running schedule, including any cross-training:

3. What are your current training goals?

4. Please describe your previous yoga experience:

5. Please describe any current injuries which may affect your yoga practice:

6. What do you hope to gain by practicing yoga?

Participant Questionnaire

Naperville Running Company

May 2013

Please rate yoga's affects on your running AFTER participating in yoga sessions.

* How many Yoga sessions (out of four) did you attend? _____

1. To what extent do you think yoga has affected your running **speed**:

1 2 3 4 5
I'm slower. No effect I'm faster.

2. To what extent do you think yoga has affected your **breathing** while running:

1 2 3 4 5
Less efficient No effect More efficient

3. To what extent do you think yoga has affected your **muscle tone**:

1 2 3 4 5
Worse No effect Better

4. To what extent do you think yoga has affected your **flexibility**:

1 2 3 4 5
Worse No effect Better

5. To what extent do you think yoga has affected your **mental stamina**:

1 2 3 4 5
Worse No effect Better

6. To what extent do you think yoga has affected your **physical stamina**:

1 2 3 4 5
Worse No effect Better

7. To what extent do you think yoga has affected your **balance** while running:

1	2	3	4	5
Worse		No effect		Better

8. To what extent do you think yoga has affected your **posture** while running:

1	2	3	4	5
Worse		No effect		Better

COMMENTS: