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## Beyond the traditional approach to teaching anatomy for yoga

Alison Marie Gardiner-Shires

### Abstract

#### Context:

The traditional approach to teaching anatomy for yoga, while systematic, is often ineffective.

#### Methods:

A unique approach to teaching anatomy for a Yoga Teacher Training seminar is presented, founded on the principles of Thomas Myers' Anatomy Trains. Lab activities are detailed and Bloom's Taxonomy is applied to ensure students are engaged in higher level thinking and application.

#### Conclusion:

Going beyond the traditional approach to teaching anatomy for yoga can be extremely rewarding for students and teachers alike.

**Keywords:** Education, kinetic chain, musculoskeletal anatomy

## INTRODUCTION

When it comes to teaching musculoskeletal anatomy the traditional approach that many have taken is to identify each of the bones and muscles in a systematic fashion. During the presentation, significant bony landmarks are identified and

muscular origin, insertion, action, and innervation are also outlined. This systematic approach is initially well received by students because it is a convenient way to compartmentalize, and therefore memorize, information. In my experience as an educator and clinician, I have found that this approach to teaching anatomy, though organized and systematic for both teacher and student, often results in students missing the “big picture.” That is, students fail to understand how each of the musculoskeletal components works together in the kinetic chain. In fact, early in my career I even struggled with this as a clinician.

An understanding and appreciation for the kinetic chain is essential to being an effective yoga instructor for many reasons, but detailing all is beyond the scope of this article. To name a few, a yoga instructor with a strong anatomical background can: Purposefully develop sequences designed to overcome common postural deficits, safely instruct students in advanced poses, recognize anatomical variations among students, and reduce the incidence of injuries obtained during a students’ yoga practice.

It was not until I was invited to teach anatomy for a yoga teacher training (YTT) program that I questioned the way I have taught anatomy for years. I knew that the students in the YTT program may have little to no anatomy background so the traditional part-to-whole approach to presenting the musculoskeletal system would definitely not be meaningful for them. As a clinician, I was introduced to Thomas Myers’ Anatomy Trains<sup>[1]</sup> about 7 years ago. Since the Anatomy Trains<sup>[1]</sup> concepts drastically changed the way I look at my patients’ injuries I decided that I would utilize them to revamp my approach to teaching anatomy for yoga. At first I was concerned that the concepts would be too difficult to understand. I decided to take a leap of faith and am so glad that I did.

## METHODS

There is no question that incorporating anatomical terms and principles into ones teaching as a yoga instructor takes practice and arguably several years to feel comfortable with. However, I believe that the manner in which anatomy is taught will make a difference in the extent to which students have taught anatomy for years. I knew that the students in the YTT program may have little to no anatomy background so the traditional part-to-whole approach to presenting the musculoskeletal system would definitely not be meaningful for them. As a clinician, I was introduced to Thomas Myers' Anatomy Trains[1] about 7 years ago. Since the Anatomy Trains[1] concepts drastically changed the way I look at my patients' injuries I decided that I would utilize them to revamp my approach to teaching anatomy for yoga. At first I was concerned that the concepts would be too difficult to understand. I decided to take a leap of faith and am so glad that I did.

There is no question that incorporating anatomical terms and principles into ones teaching as a yoga instructor takes practice and arguably several years to feel comfortable with. However, I believe that the manner in which anatomy is taught will make a difference in the extent to which students realize how critical it is to have a strong anatomy background. The following is a summary of how I structure my YTT class, utilizing Myers' [1] concepts.

First, I begin with a brief discussion of musculoskeletal anatomy to ensure baseline knowledge. Terms include the most basic parts including bone, joint, tendon, ligament, concentric, eccentric, agonist, antagonist, etc. Next, I provide an overview of the Anatomy Trains[1] concepts. This is a brief summary highlighting the most important concepts outlined in chapters 1 and 2. It is here I note that Myers' states his approach to anatomy is not scientifically supported, rather

founded on years of practice and feedback.[1] While I explain this to my students, I follow-up by providing evidence of how my own practice has been positively affected.

After the introductory portion, I then begin my lab-based approach to learning Myers’ seven “lines.”[1] It is in this section that I spend a significant amount of time identifying the structures in each line and infusing the practice of yoga to help students apply their knowledge. The design of each of the seven labs (one lab for each “line”) is similar and utilizes Bloom's Taxonomy[2] to ensure students are engaged in higher level thinking and application [Table 1].

Table 1

Component	Lab activity	Bloom's Taxonomy <sup>[2]</sup> objective
Identification of anatomy trains line <sup>[1]</sup> structures	Students partner and palpate each of the bony and muscular structures of the line	To locate and understand each of the structures of the line
Application to yoga part 1	In small groups students discuss and identify as many yoga poses as they can which elongate and activate the line	To apply the anatomy trains lines concepts to the practice of yoga
Application to yoga part 2	As a group, students demonstrate poses they identified in small groups. Discussion centers on specifically understanding how the lines are being activated or elongated during the poses	To analyze the lines
Discussion of common postural patterns, compensatory mechanisms and sites for injury	I present and discuss common postural patterns, compensatory mechanisms and sites for injury within the lines	To synthesize and evaluate the lines

The Superficial Front Line (SFL)[1] and Superficial Back Line (SBL)[1] work well as the first two lines that students learn because they include musculature which many students are familiar with prior to taking the YTT seminar, such as the quadriceps and hamstring muscle groups. The postural patterns, compensatory mechanisms and sites for injury discussed are also commonly identified in many of the students in the class. In addition, the components of SFL and SBL represent agonist/antagonist relationships which allows for ease in the application (i.e., yoga poses that elongate SFL subsequently activates SBL and vice versa). To further expand on the process of my YTT seminar I have detailed the SFL and SBL labs in Table 2.

Table 2

Component from table 1	SFL	SBL
Application to yoga part 1	Examples of poses which lengthen SFL and, therefore, activate the SBL: Wheel, Crescent Moon, Bridge, Bow, Camel, <sup>[1]</sup> p. 239-42	Examples of poses which lengthen SBL and, therefore, activate the SFL: Forward bend, Downward Dog, Plow, Child's, <sup>[1]</sup> p. 239-42
Discussion of		
Common postural patterns	Forward head, rounded shoulders, anteriorly rotated pelvis	
Compensatory mechanisms	Shift in body's center of gravity due to postural patterns	
Examples of sites for injury	Medial tibial stress syndrome, tendonitis of the quadriceps	Hamstring strains, achilles tendonitis, low back pain

SFL = Superficial Front Line; SBL = Superficial Back Line

## In-depth look at the SFL[1] and SBL[1] labs

I spend at minimum an hour exploring and applying each of the seven lines. After going through each of them, the students are understandably overwhelmed.

However, I am constantly reminding them that incorporating their new knowledge will take time and practice and I challenge them to set small goals for themselves.

## CONCLUSION

My seminar is broken up into two sections, one in the fall and other in the spring. This is a great format because it allows the students to have some time to digest and apply their knowledge before seeing me again. In addition, it provides me with the opportunity to gather feedback from them and help them along the way. As an educator and clinician my work with our YTT students has been incredibly rewarding and invigorating. I have reached a group of students that I never thought I would have the opportunity to, and I truly believe that they teach me more, than I do them.

## Footnotes

Source of Support: Nil.

Conflict of Interest: None declared

## Article information

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