

Drawing the Body Into Memory

art, anatomy and the science of embodied learning

we carry our anatomy everywhere, but knowing we're made of muscles and bones doesn't key us into how they fit together. Research suggest that drawing, touch, and other artistic approaches help bridge the gap between body and memory. Turning a flat diagram in a learned mental model that's easier to retrieve.

How do all the different aspects of anatomy (muscle, bone, tissue) connect and interact?

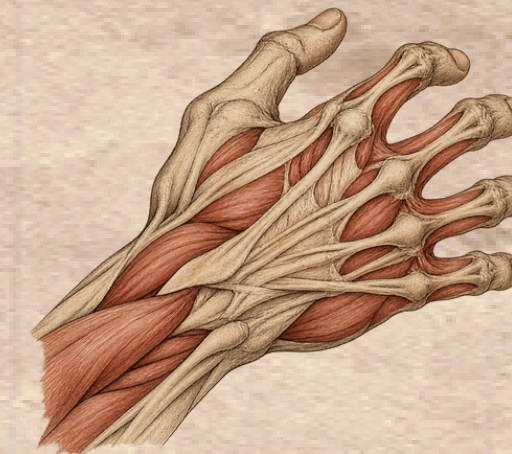
1

From Sight to Memory



2

Trace the Form in Your Body. Feel the Muscle Underneath

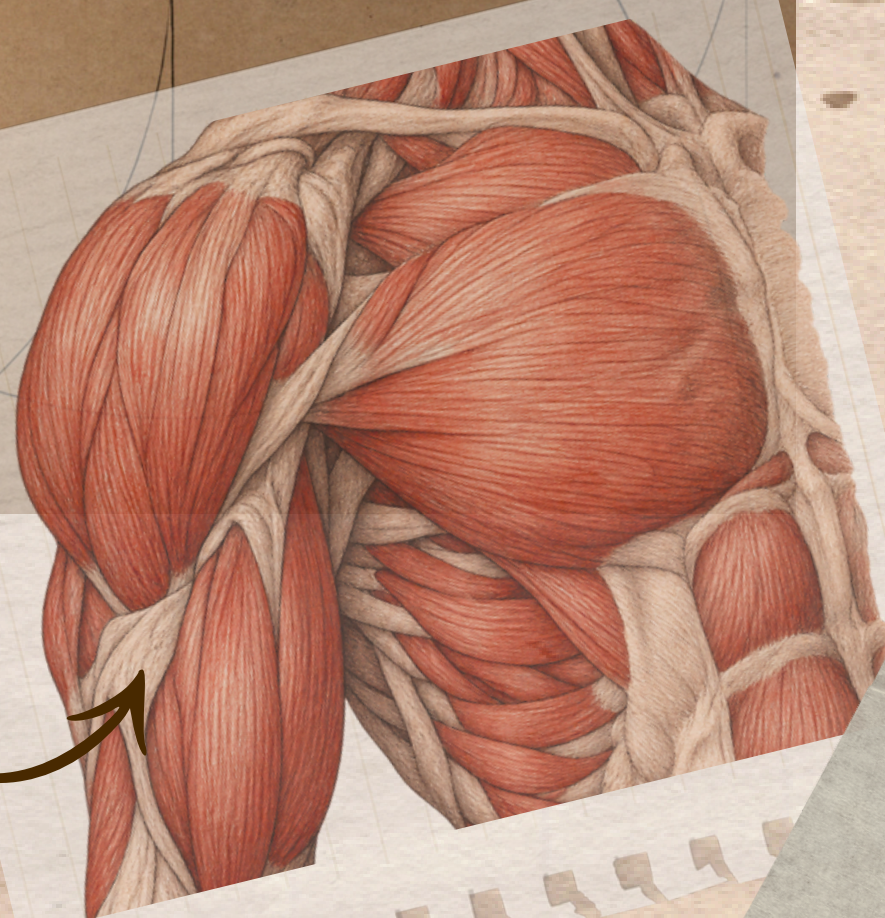


3

Engage, Bulid It in Your Mind



A close look at the striated muscles that organize to allow fluid, full body movement



You are the art you seek to understand

Science students are **used to memorizing diagrams**. You look at the labeled image. You cover the labels. You quiz yourself. You repeat the process until the structures **hopefully** stick.

But anatomy asks us **to understand more than names**. We have to know where structures are, how they relate to one another, and how a flat image on a page represents something three-dimensional inside a body.

That is where drawing might help.

Research in anatomy education suggests that drawing can make studying more active. In one study involving 416 medical students, **students who drew facial muscles either before or after dissection remembered more anatomical information than students who completed the dissection without drawing**. That advantage was still present *weeks* later.

The point is not that your notes **have to look good**. Drawing **forces** you to make decisions that simply looking at an image does not.

Where does this muscle begin? Where does it end? What sits beside it? What overlaps it? What direction does it travel?

Even a rough sketch requires you to reconstruct the structure instead of only recognizing it.

And drawing may do more than help with memory. Researchers studying haptico-visual drawing combined looking, touching, and sketching anatomical objects. Participants described forming detailed mental pictures of the structures, including their three-dimensional form. **Other work using haptic surface painting had students explore anatomical structures directly on their own bodies using vision, touch, and paint.**

This exercise illustrates the spatial elements of anatomy. A textbook gives you a flat picture, but your brain eventually has to turn that picture into something you can mentally locate and visualize.

Don't worry, you can keep your flashcards, practice questions, or traditional diagrams if they really work for you.

But, research does suggest that the next time you find yourself staring at the same anatomy image for the tenth time, it might be worth grabbing a pencil.

Redraw it badly.

Label it from memory. Draw the structure from another angle. Sketch what sits underneath it. Try to recreate the relationship between two structures **before** checking the textbook.

Your drawing does not need to belong in an art museum. It just needs to make your brain do more than look.