Wrist Yoga Block

Purpose:

The goal of this project was to address the problem of wrist pain while holding up your weight during yoga poses. A tip among the yoga community to address this is to put pressure onto your whole palm specifically in your fingertips. This spreads out the area in which the weight of your upper body is held. There are many things to focus on while holding a pose including balance, tightening the core, and breathing, which can be a lot especially for beginners. This block slightly increases the angle between the forearm and the wrist forcing more weight into the rest of the hand. The block will have an imprint of the owner's hand in order to allow for better traction. The thickness of the object is thin enough to not drastically affect the pose by greatly increasing the distance between the hand and the ground.

Design and Prototype:

I have a background using SolidWorks but unfortunately due to trying to keep the budget low, I couldn't buy it and had to find a free alternative. Using a Mac CAD software called Shapr3D, I drew out a virtual drawing of the wrist yoga block. The measurements were taken directly from my hand for a rough outline of the hand impression. The dimensions of the block were rough estimations and would have to be adjusted for any progression of this design besides this final project. This program was unfortunately very basic, and I had no access to colors or drawings and had to improvise with screenshots placed into a word document as seen in image 1. When deciding on materials, I felt it would be best to use something that could be moldable and then air dry over a base. I used air dry clay that already had color as well as a Styrofoam base because it seemed easiest to cut and glue into the desired shape and was cost efficient. In the end, due to the thin dimensions and only cutting with a X-acto knife, cutting the Styrofoam was a much harder task than anticipated and results were not accurate.

Assessment of the Design:

Once the clay dried, I was able to test the prototype (image 2) and brainstorm changes for the future. One note was the clay contracted inward when it was fully dried and slightly warped the block. The clay had a very giving texture which was good as it will be softer on the palm. The height of the smaller edge ended up being 0.35 inches instead of the initial 0.01 which is much more reasonable. The taller side ended up being .55 of an inch which was very close to the original and a good height. I think that a slightly larger difference would be beneficial and maybe aiming for a height of 0.25 inches on the smaller side. In addition, I believe

that the measurements should be given in cm in the next drawing to make it usable globally. At the time, I was unfamiliar with the Shapr3D software and didn't realize I could change the units. As for materials, I think there should be a stickier material on the bottom of the block to prevent slipping and possibly an air-dry foam that won't warp the base as much.

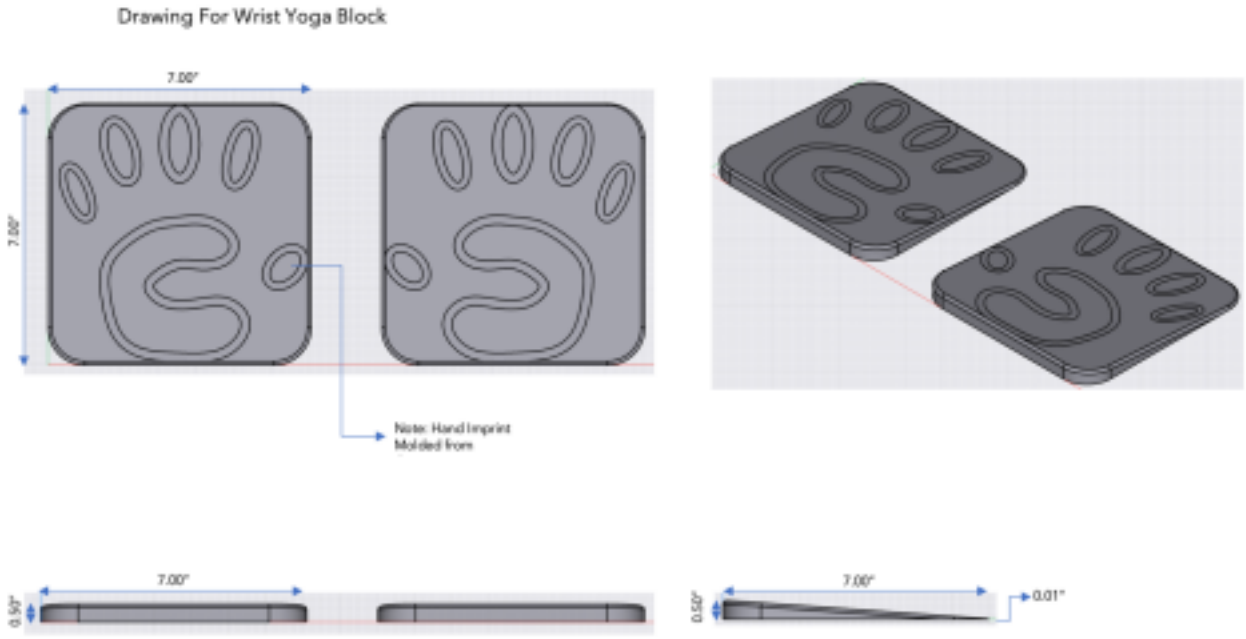


Image 1: CAD drawing of the Wrist Yoga Block



Image 2: Prototype of the Wrist Yoga Block