# PVC MASSAGE STICK -- for do-it-yourself back massage

by **Thinkenstein** on January 13, 2010

**Table of Contents**

## Intro: PVC MASSAGE STICK -- for do-it-yourself back massage

You know how you feel and where you hurt better than anyone else can know. Next time your masseuse is AWOL (unfortunately a chronic situation for a lot of us), get out the stick and fix things yourself.

Muscle spasms feel like hard lumps in the muscle tissue. You can feel them on another person's back with your finger tips. Feeling your own muscle spasms with your hands is a bit more awkward, due to their location in back of you. With the massage stick you can reach them, and work on them to make them go away.

By applying pressure with the massage stick "finger", holding it for a while, releasing pressure, and repeating the cycle several times you can actually relax the muscle spasms. Eventually, they soften up and stop causing pain.

The PVC pipe is filled with sand, heated and bent to make the bow shape. The curve makes the stick more comfortable to hold while applying pressure with the finger.

The silicone rubber finger is built around a nail, so it has rigidity for pressing, yet the tip is soft. It does a great job. This is something that everybody with a back should know about.

## step 1: Safety while heating PVC

We love plastics for what they do for us, but plastic manufacture and decay tend to pollute the environment and negatively affect our health.

Vinyl Chloride, one of the components of PVC, is carcinogenic. When it is locked up in the polymer, however, it is much safer to be around. In my years of experience working with PVC, I have not noticed any adverse effects on my health from being around it.

Always work in areas with good ventilation. If you do get caught in a cloud of smoke, hold your breath and move to clean air.

When heating PVC with a gas stove or propane torch, try not to let it burn. Smoke from burning PVC is bad. With experience one burns it less and less. Don't panic the first time you do burn some. It scorches, but doesn't immediately burst into flame. Move the material away from the flame and try again. Don't breathe the smoke. Smoke avoidance comes naturally for most people.

While heating PVC over a gas flame, keep the plastic an appropriate distance from the flame to avoid scorching the surface before the inside can warm up. It takes time for heat to travel to the center of the material being heated.

Keep the plastic moving, and keep an eye on the state of the plastic. When heated, the PVC material is flexible, like leather. Beyond this stage, you risk scorching it.

A word from James, the plastic engineer -- "Just a word of warning, PVC can handle some high heats but if it catches fire, you wont be able to put it out, it does not need oxygen to burn so don't do this inside".

I do work inside, but my house is made of cement and has good ventilation. MAKE SURE THAT YOU HAVE GOOD VENTILATION. PLAY WITH FIRE -- CAREFULLY.

## step 2: Fill the pipe with sand

The first step is to cap one end of the pipe with some masking tape and fill it with sand. Tap the end on the ground a few times to help compact the sand. Fill the pipe to the top and cap that end with masking tape, also.

When you heat and bend PVC pipe without a temporary fill material inside it, the pipe will tend to pinch closed at the bend. Sand keeps the inside of the pipe open, and makes the finished bend stronger.

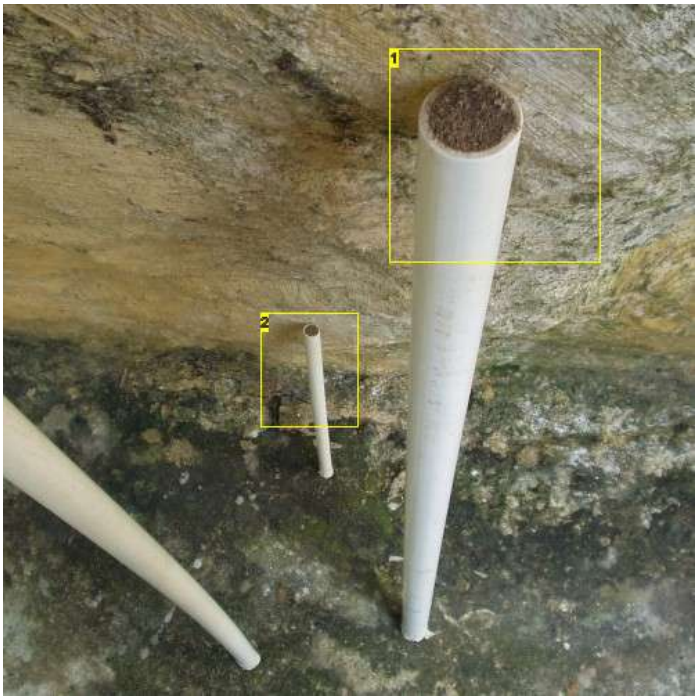


**Image Notes**
1. Pipe filled with sand.
2. This was a smaller pipe for another project. The same bending technique can be used for many different projects.


**Image Notes**
1. Sack of sand.

## step 3: Heat and bend the pipe

I heat the pipe over a gas stove. Holding the pipe too close to the fire may result in burning the plastic. Don't be in too much of a rush. Keep an appropriate distance from the flame, and keep the plastic moving to heat it evenly. Conveniently, the ends of the pipe don't have to bend, so they provide cool handles to hold the pipe by. When the pipe is flexible like leather, it is ready to bend.

Bend the pipe on the floor, so the curve hardens up in one plane. You can just wait for it to air cool and rigidify again, or you can speed cooling with water.

When the pipe cools, remove the tape from the ends and tap it repeatedly to knock out the sand inside.

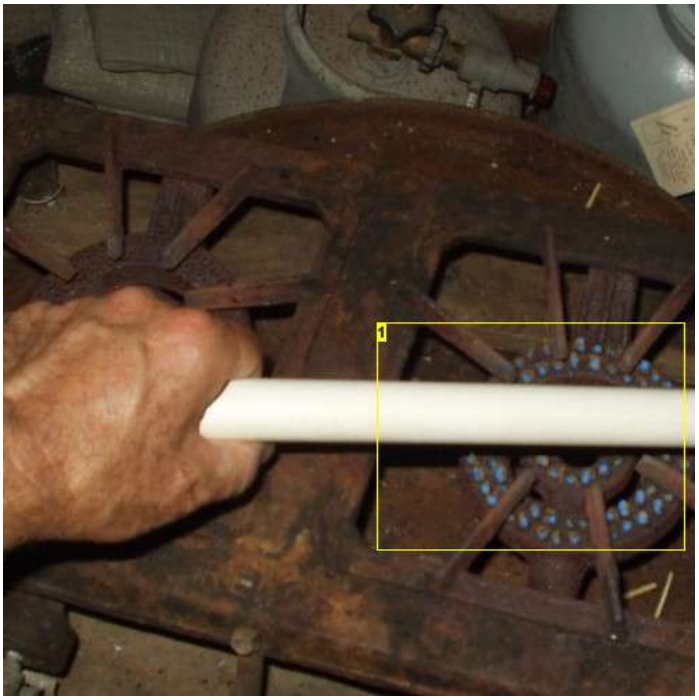


**Image Notes**
1. Keep the pipe moving, and at an adequate distance from the flame to avoid burning.

## step 4: Drill hole. Drive nail.

You can drive a nail through PVC pipe if you drill a slightly tight hole for the nail first. Don't make it too tight, or the plastic might split. I think I used a 2 inch nail. The nail is the post upon which the silicone rubber and string finger will be formed.


## step 5: Build up the finger

I use string or light rope as filler while I build up the finger with silicone. The fill material helps conserve on silicone. I buy clear silicone at the hardware store in cartridges that go in a grease gun.

Keep the string or rope saturated with silicone as you wind it around the nail. I flatten the silicone at the tip of the finger a little bit for comfort.

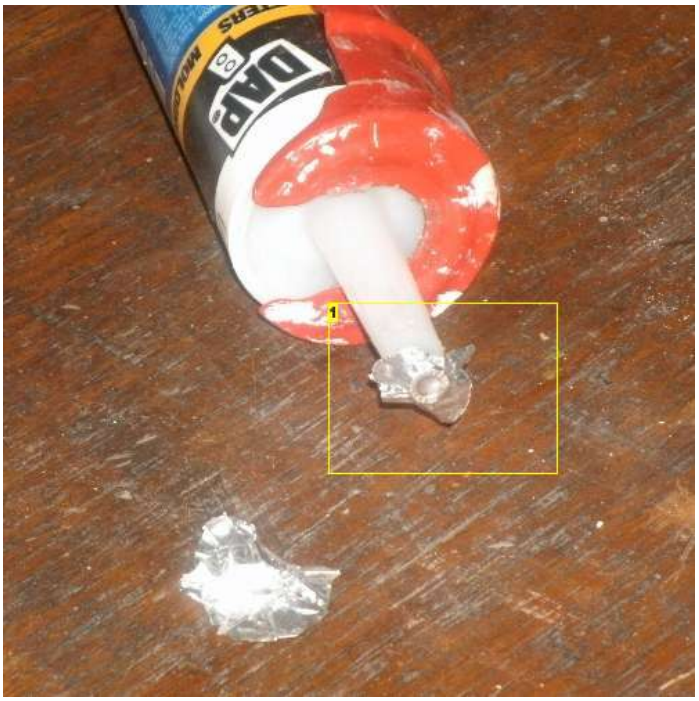


**Image Notes**
1. When I am done, I cover the tip of the cartridge with a little aluminum foil pressed into the exposed silicone. That keeps the end from drying out. If a dry plug does form, you can loosen it with a small screwdriver and force it out the end under pressure.

## step 6: Using the Stick

The stick can reach anyplace on the back.  Because of the curved stick one's arms don't have to reach as far back, and the work is done a lot more comfortably.

Mix the massage stick with a little yoga and you've got a great combination for keeping the body  flexible and pain-free.

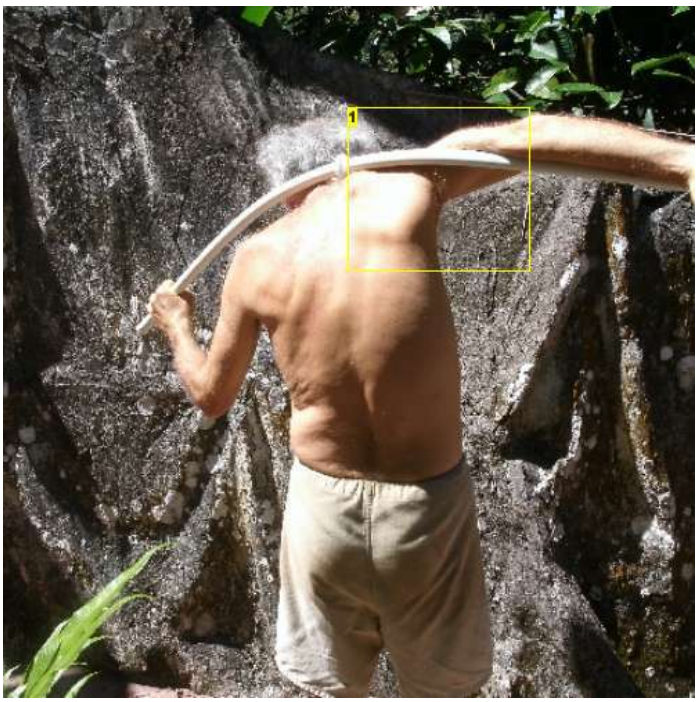


**Image Notes**
1. You can work on shoulder joint movement, while relaxing that arm. In this case, all the work is being done by the left arm.


**Image Notes**
1. The lower back is easy to work on. Because of the curve of the stick, the arms don't have to be as far back as they would be with a straight stick to exert pressure. It is more comfortable.


**Image Notes**
1. This arm is relaxed, and just contributes weight.

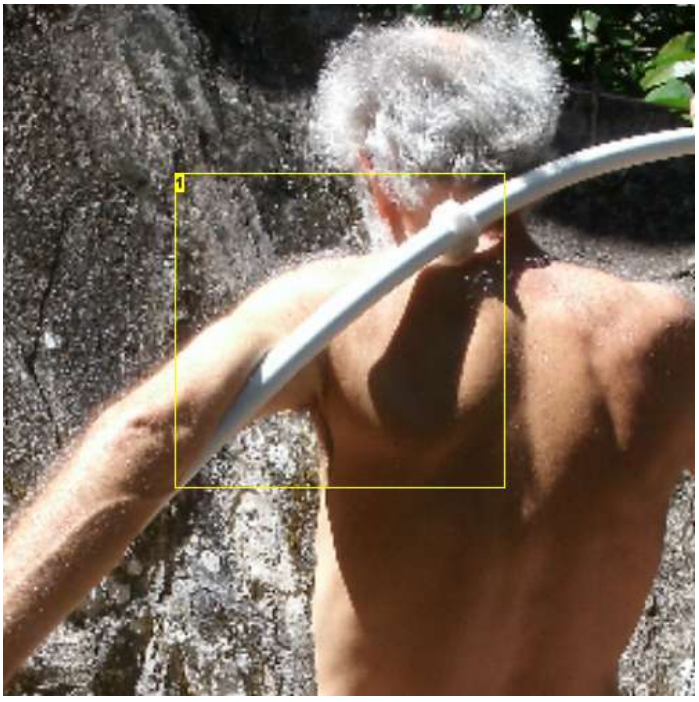


**Image Notes**
1. The finger rests on and massages the shoulder muscles. The left arm rests, relaxed on the stick, contributing its weight. The right arm does all the work.

## Related Instructables

**Measure Muscle Sounds! Part 2: Silicone Embedding** by Operon

**Back Massage Machine** by DIY Technologies

**Jigsaw Massager** by rachel

**Constructing a 3D Settlers of Catan Board** by homechicken

**Massage me Custom cable and plug** by Plusea

**Massage me Jacket** by Plusea