

Materials List for:

Rat Model of Adhesive Capsulitis of the Shoulder

Stephen M. Okajima^{*1}, M. Belen Cubria^{*1}, Sharri J. Mortensen¹, Juan C. Villa-Camacho¹, Philip Hanna¹, Aron Lechtig¹, Miguel Perez-Viloria¹, Patrick Williamson¹, Mark W. Grinstaff^{*3}, Edward K. Rodriguez^{*2}, Ara Nazarian^{*1,4}

¹Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center and Harvard Medical School

²Carl J. Shapiro Department of Orthopaedic Surgery, Beth Israel Deaconess Medical Center and Harvard Medical School

³Departments of Biomedical Engineering, Chemistry, and Medicine, Boston University

⁴Department of Orthopaedic Surgery, Yerevan State Medical University

* These authors contributed equally

Correspondence to: Ara Nazarian at anazaria@bidmc.harvard.edu

URL: <https://www.jove.com/video/58335>

DOI: [doi:10.3791/58335](https://doi.org/10.3791/58335)

Materials

Name	Company	Catalog Number	Comments
Sprague-Dawley rats	Charles River Laboratories, Wilmington, MA, USA		250-300 g
Surgical tool:			
Injection needle			BD 1' 30 guage
Needle holder			
5% isoflurane			
2% isoflurane			
Nose cone			
Skalpel and skalpel holder			No. 11 skalpel
Curved hemostat forceps			
Staright hemostat forceps			
Tissue retractor			
Toothed tissue forceps			
Plain tissue forceps			
Dissecting scissors			
Suture scissors			
Skin clip applicator			Any standard staples for wound closure
Immobilization material	Ethicon		No. 2-0 braided polyester ethibond suture was used for immobilization
Other materials:			
Costumized device for ROM: 1)Sensor assembly, 2)pivoting axle, 3)arm clamp			Assembly that is described in relaxin paper and adhesive capsulitis paper
Orientation sensor (part of sensor assembly)	MicroStrain Inc., Williston, VT, USA		3DM-GX3-15
Reaction torque sensor (part of sensor assembly)	Futek Inc., Irvine, CA, USA		TFF400
Stepper Motor	SparkFun Electronics, Niwot, CO 80503		https://www.sparkfun.com/products/13656
Microcontroller	Torino, Italy).		Arduino UNO, R3
MATLAB code	MATLAB 7.13.0.564, Natick, Ma, USA		
Weight Scale			Ohaus