

How to Reduce Muscle Soreness | Dr. Andy Galpin & Dr. Andrew Huberman

So what are some other methods that we can use to alleviate acute soreness Well if we continue on the same theme which is saying OK we use some sort of pressure manipulation to enhance recovery If compression is one strategy you can also use things like um compression boots or garments and these are nomadic devices that will you know pump uh air outside you and compress uh back and forth There's any number of devices that will do this Um you can also use the physical hand So this would be massage and body work Um They're all really working as best we can tell on the same mechanisms which are effectively moving fluid in and out of the tissue as well as potentially enhancing blood flow uh increasing capitalization and which is going to only get nutrients in and waste products out So you can kind of pick and choose based upon your budget uh preferences availability timing things like that So those are all uh effective strategies outside of that really is the next largest category which is now thermal And uh and so far in this discussion we've mentioned cold water immersion and I talked about in the hyper section how you would not want to do that immediately post exercise which would be getting into cold water or an ice bath if you're trying to grow muscle mass Having said that there is good evidence showing that cold water immersion specifically is effective at reducing muscle soreness So it is a fair consideration and it's a classic example of how there are no free passes in physiology Nothing is always good or always bad It's always about what are you willing to give up and versus what you're willing to get And the case of like cold water immersion you may be thinking yeah I might want some hypertrophic adaptations But if you're in that phase of training where you're actually trying to push more towards optimization in that moment rather than long term adaptation then a an ice bath might be a great choice In addition if you fall into a scenario like Natasha did and you realize like I'm just so unbelievably sore this might cost me three or four or five or six days of training It might be worth it for you to accelerate that recovery process by a couple of days so that you don't miss so much training So it's it's just a it's an algorithm It's an equation What am I looking for Uh Again if I'm in season or trying to compete or if I have just done way way too much exercise And I am really in significant pain you would probably be willing to give up some small percentage of eventual muscle

growth after a single session to get out of pain So um of the cold strategies cold water immersion is clearly the best approach rather than cold air or some other tactics So a cold shower is probably not enough here You really do Uh wanna be either in moderately cold this is maybe 40 to 50 degree water uh for probably north of 15 minutes or you can be in sub 40 for as little as maybe five minutes to get some of the fact there And there's been a number of studies Um so I'm sort of summarizing a bunch of that kind of into one rather than going through them point by point The numbers you just throughout uh I'm assuming are um uh Fahrenheit um seem seem really cold to me uncomfortably cold Absolutely I always recommend that people ease into it as a protocol overall that they not immediately go to 35 degree uh cold water if they've never done it before Uh that said once people are comfortable being uncomfortable because I always answered the question how cold should it be Exactly Would you agree that it should be very very cold so much so that you really really want to get out but that you're able to stay in safely whatever that value happens to be you absolutely need to be safe having said that we have actually in our X BT retreats put uh dozens if not hundreds of people at this point uh immediately in the sub 35 degree water their first time ever and done you know three minutes multiple rounds uh and a session so they can handle it But you don't need to go that crazy if you don't want you kind of have to play a game right Do you want to be really really cold for a short amount of time or do you want to be like kind of cold for a longer amount of time I really the only mistake you can make is doing something like you know 65 degree water which for most people is not very comfortable and doing you know five or 10 minutes it's gonna be it's probably not gonna be effective So if you're like man 35 is is absolutely crazy and you want to do 55 degree water and there's literature in that area Uh but it's going to say you need to probably be there you know somewhere almost surely north of 10 minutes and some of it will actually show you need to be in there like well north of 20 to 30 minutes So for my money I would rather go really really cold and get it done in five minutes But um personal preference on this one you can also make it a little bit easier on yourself there Is not nearly as much evidence but there is some on contrast stuff So uh this is when you go cold hot and sort of back and forth there are no really good rules in terms of how much should you go How many rounds how long and cold how long and hot again there have been a couple of studies but and obviously those studies use numbers but that doesn't mean those have been tested to see what what are optimal which is a very big difference So um you

can really just kind of play that by feel hot is good for recovery You just have to be careful because you are going to put more blood flow in the area And so you you may walk out of there with some additional acute swelling which is then gonna put greater pressure on there So uh you have to kind of play with that I personally really like hot uh for recovery I will feel maybe not great in that moment But the next day I tend to feel really really good In addition if I wake up the next morning and I'm really really hurting and and I'm super stiff a hot bath will will help that um quite a bit So you can play with some of those protocols Uh Again you don't have to do ice There is absolutely no requirement to do so it is just an option if you're interested Yeah the studies of Doctor Susannah Soberg are not directly aimed at alleviating soreness or recovery They're more about uh increasing thermal capacity by a storage of uh brown adipose tissue not the blu fat but the stuff around the clavicles and on the heart that help you generate body heat at rest and metabolism and so on And the numbers there that um she's come up with again have not been tested against all the possible derivations just like with breathing We did five minute sessions but who knows maybe a minute would have been equally effective We just there are constraints on these sorts of studies but the values that she's come up with which seem to be good thresholds for making sure that an adaptation response is triggered by heat and cold is it ends up being 57 minutes per week total of uncomfortable but safe heat In that case sauna and that can be all in one session or breaking it up into a couple of sessions on the same day or or different days and then 11 minutes per week of cold either in one single session or multiple sessions Again one could do more Um One could break that up over you know multiple days or do it all in one day or do it all in one you know an hour in the sauna and then 11 minutes in the cold or vice versa Although that seems a little bit extreme especially for the uninitiated but those are the numbers that have been studied But as you point out there are not a lot of really thorough studies examining different cold protocols according to temperature by time requirements So there is a bit of subjective feel required to establish a routine And I I would actually say this is another time to reemphasize something we talked about at the beginning of our conversation which is that pain itself is not a defined outcome Uh It's heavily influenced by your perception And so if you don't feel like they work for you they won't work if you feel like they work fantastic they do So it's a challenging field to get really objective data on So there's always going to be a little bit of um subjective nature to some of these things I I can tell you anecdotally We've

used hot and cold contrast for a long time with athletes Um Some love it some don't care for it and everything in between So it's one of those things where I never mandated Yeah of course I can't mandate anything for anyone I work with but I'm never you know like hey are you interested Great You're struggling in this area Do you wanna try this You did and you liked it Great You're struggling in this area and you tried it You didn't love it OK fine I'm not we'll we'll find other routes as we we'll get into There's a lot of ways to enhance recovery Um This is only one and it hasn't even really come down to stopping the problem in the first place We're not we're just treating symptoms uh which is first line of defense but you really need to go back and figure out why it's happening to begin with as a solution Um These are just different again acute symptom management tactics