

The Best Way to Breathe When Lifting Weights | Dr. Andy Galpin & Dr. Andrew Huberman

Is there a general rule of thumb for how to breathe during repetitions during work for strength maybe even strength versus hypertrophy in a way that maximizes oxygen input to the system you know keeps you uh alert and conscious but that also protects the body by creating some rigidity in the system right Because certainly being de with all your air exhaled the body is a very different beast in terms of stability than with the body full of air versus you know breathing during the repetition movement There's a maneuver that is long been uh labeled the Vols Salva technique So what that really means is you're trying to use air to create intraabdominal pressure And what you're really trying to do is create a cylinder around your spine Um The real issue you have to to play here is regulation of blood pressure and spinal stability Now you should be able to breathe and embrace what I mean by that is you should be able to create total intraabdominal pressure regulate uh spine control while breathing It's just very hard for a lot of people to do It's it's a skill You should absolutely work on Um you can actually you can do this and you can go around like I do this trick in class and students can come and like push any part um of my entire abdomen It's super tight and I can talk Now It's gonna be a little bit labored You can hear a little bit of a difference but you should be able to do that if you have to like hunch down and you can't even muster breath And it takes that to create pressure You're not actually um you don't really understand the abdominal control necessary to create that stability So step number one is that's the goal Now with the blood pressure thing we have to be careful because a standard blood pressure uh ideally if we sat around right now it was probably something like 100 and 20/80 systolic versus diastolic That's a normal number right High blood pressure is something over that Well with an acute bout of exercise you can see that number reach as high as like 4 50/3 50 which effectively means you have total blood occlusion right Your blood pressure is so high blood is not moving anywhere And so in the middle of a very heavy set especially complex movements especially when they're loaded on your body Um This could be an overhead press or or squat variations anything like that Um Blood pressure is gonna be a problem and the reason why that matters is that's what's gonna make you pass out It's not the fact that you ran out of oxygen in three seconds It's the fact that blood pressure got so high you

blacked out And so we wanna have we're gonna have to play this game of releasing a little bit of the pressure so we can actually get blood to move a little bit making sure that we don't lose spinal stability Um so we can finish our workout That's really the question you asked right How do I play this game of Oh I have several £100 on my back or my chest and I don't want to exhale right So that I don't lose spinal stability but at the same time I don't wanna pass out right which is a which is a problem So uh kind of a couple of rules of thumb if you're going to be doing something in which you can complete the entire exercise without a breath and it is of a maximal or close to load that's probably your best strategy So in that particular case you'll see a lot of breathing techniques um where you're gonna take a very large inhale Um ideally this is done through the abdomen not the shoulders So we shouldn't have seen clavicles rising during this thing You'll see a common mistake of of the bars on their back and you see people do this like big inhale thing and all they do is elevate their clavicles and that's not necessarily going to increase pressure through the abdomen which is what you're looking for So you wanna be thinking about belly moving out in all four areas in front of you to your left and right and to your back That's that quadrant sort of idea of stabilizing your spine You can do that independent of your clavicles moving your shoulders don't need to rise for that You don't really need the oxygen for a metabolic purposes You're just using the air for a brace That's really all you're after So you're trying to visualize your torso as more or less a cylinder Yep And you're trying to fill it with air The logic being that if I were to push down on to a say a a full unopened can of soda water for all you sugar folks out there soda water Uh and then push as hard as I could It's gonna be hard for me to crush that can But if the can were empty or if it were a little bit kinked in the middle then I could likely crush that can Yeah What you're really doing is you have your spinal erectors in the back right And then a whole series of abdominal exercises and you actually have some neural control systematic control of contracting those But the you don't have muscles on the inside that you can do So you're basically bringing in air and saying I'll use air to push from the inside out And I'll use muscles to push from the outside in to create this brace And I don't want over compression with the muscles This is uh like if you if you see people that have just enormous spinal erectors sometimes that's an indicator of of actually a poor breathing or bracing strategy because they're using spinal rector to create all their compression and not actually using the inside enough It's not always the case but sort of like a thing to think about So over compression through the

spinal rector is not necessarily ideal Um If you want the the best scenario is a little bit of a brace of both So we use some air to push this side we use some muscular to press that way and then that that spine is is nicely held in position Um Again not in a position where I've locked on my diaphragm and I can't get any air out I should be able to get that brace pattern Um and then be able to speak In fact like I'm doing it right now and you'll see like a little bit of a if you're really paying attention to my voice you can hear a little bit of a subtle difference but I should be able to do this for quite a long time right Like II I could take a maximum rep right here in this position whether I'm overhead pressing doing some sort of row like anything and feel very braced in in the entire quadrant This is very helpful I I'm going to work on it But can we say that an effective way to start off in terms of breathing during repetitions would be to take a gulp of air during the lowering phase the eccentric phase and then to exhale during the concentric exertion phase I asked that because that's what I've been doing for a while and it makes me feel safe I don't know if I am and it allows me to exhale as I exert the the hardest portion of the exercise And perhaps I also borrowed that from martial arts where one tends most often is trained to exhale on the on the strike If you're going to be doing again the number of repetitions can be completed without a breath A lot of times you're better off saving that exhalation until you complete Well but you don't have to But for a reasonably heavy set of hack squats or even leg extensions and given that I already can't leg extension my body weight maybe be established and maybe this is why um the idea of holding my breath for an entire compound set So again brings to mind um you know like where is my insurance card Who's gonna drive me to the hospital this kind of thing Um In all seriousness what if I want to breathe during the set I I'll clarify I'm generally meaning if you're doing like a one rep max or something like that So it certainly I could hold my breath for a one repetition maximum that you know maybe like a double or something like that depending on what you're doing Like maybe a AAA bench press you can probably do three and get away with it A squat it gets harder dead lift So it kind of depends on the exercise Um You wanna take that breath though prior to the centric portion not during So breathe in lock we're set and now start our movement pattern wherever it's gonna be Um exhaling on the concentric portion during it it is fine It's no problem Um especially if you're not extremely heavy And what what are your thoughts on grunting and screaming I don't care I don't tend to do that I'm occasionally known to squeal or whimper Um but I do I do it very quietly I think of you and I think

squeal whimper Absolutely Thanks Um If you're going to be doing multiple repetitions uh what we actually do for the NFL combine is we teach them a very specific Excel strategy So there's one test that they do uh which is they bench press £225 for as many reps as possible A lot of these people will get 25 to 40 repetitions So we have a very specific breathing pattern It would be something like if we think that they're gonna do around 25 reps say that's like our goal We might say ok do the 1st 10 out of breath and then exhale reset and then do five breath and then you might do five breath three breath two breath and then one breath per rep until we can't get any more Um so we'll have very specific strategies for them Um so what I would say is is think about how many you're going to complete and and then breathe according uh to that and it tends to increase in frequency as the number gets closer to failure because you're gonna want that that air a little bit But you just wanna make sure that when you're when you're breathing back in you're in a safe spot So you don't wanna be catching that like rebreathe when the weight's on you you wanna be in a locked out position or away from you when you're standing Um So it tends to be uh like at the end of the exercise not in the middle of it Um which is it is going to be a rest of your problems If you take your breath then