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## Don't Neglect Your Neck

Bill Starr recommends a host of exercises to build a strong upper back and neck.

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By Bill Starr

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Mike Warkentin/CrossFit Journal

When I review the programs that are sent to me, I quickly check to see if the athletes included any specific exercises for the neck. They never do. It's as if people assume their necks are getting sufficient work from all the other movements in their routines.

In the case of Olympic lifters and those who include some explosive lifts such as power cleans and power snatches or high pulls and shrugs, they really don't need to do much more for their necks. But most of the letters I receive from older lifters show that they are not doing any dynamic movements, nor are they providing for their necks in any way. This is a mistake and needs to be corrected.

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For those athletes who participate in contact sports, such as hockey, lacrosse, football and soccer, having a strong neck is an absolute must. It can mean the difference between getting a stinger in the neck after a head-on-head collision or being carried off the field and into the emergency room. Injuries to the neck are scary, and one of my greatest fears when I was strength coaching at the University of Maryland, the University of Hawaii and at Johns Hopkins was that one of my athletes would sustain some sort of neck injury. None ever did, and for that I was thankful—thankful that they did what I told them to do in the weight room and thankful that a bit of luck was on their side.

The sad truth of the matter is that even if an athlete works his neck and upper back diligently, he is going to get injured if he gets hit just right. Yet a strong neck is still an asset because it will lessen the severity of the injury. I've talked to a great many people who told me in no uncertain terms that weight training saved them from being badly hurt during a car wreck. Whiplash put the muscles of their necks under a great test, and they walked away from the twisted metal. Sure, their necks were sore, but it was nothing that a few aspirin tablets couldn't handle.

And, of course, a few sports require extra-strong necks for the athletes to be successful. Wrestling is the one that pops in my mind. I learned how to strengthen my neck when I was a member of the Wichita Falls Y wrestling team. I was also competing in Olympic lifts at the time, so the combination of pulling heavy weights and doing the neck exercises on the mats helped me build a strong neck. And the stronger my neck got, the more all the other exercises in my program improved—even those for my shoulders and chest. I found that when I scrunched my traps up into my neck and got everything in that package extremely tight, I could overhead press, incline, dip and flat-bench more weight than when I allowed my neck and upper body to relax.

All the programs I give to athletes, both male and female, young and old, are based on what I learned at the Wichita Falls Y a very long time ago. I know the programs work well from personal experience and from observing the many athletes I have dealt with over the years.

However, there is a group of older athletes who can no longer do any dynamic movements. Nor can they utilize many of the specific neck exercises younger athletes thrive on. Yet the older athlete needs a strong neck more than his younger counterparts.

Recently, I have run into a number of men I have trained with at one time or another in Harford County. They are all in the middle 50s to early 60s, and they all tell me the same thing: their necks ache them something terrible and in some cases prevent a decent night's sleep. A couple consulted medical doctors and were advised to have surgery to relieve the pain.

In this article, I'll deal with two separate groups of strength athletes: those who can still do some explosive movements and those who cannot.

### **Pull It High**

Building a stronger neck starts with making all the upper-body muscles more powerful. It's simply impossible to improve strength in the neck if the traps are weak. There are quite a few muscles to consider when attempting to strengthen the upper back: minor and major rhomboids, infraspinatus, teres major, serratus posterior, superior latissimus dorsi, deltoids, and, of course, the main player—trapezius. The latter muscle is very large and made up of four layers. It's shaped like a trapezoid, hence its name. It originates at the back of the skull, approximately on a line with the top of the ears, then swings out and down to form a V shape where it connects with the deltoids and finally inserts at the last thoracic vertebrae in the middle of the back.

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Making sure all the muscles of the upper back get worked regularly and with heavy weights helps secure the upper spine and makes the entire shoulder girdle more stable, which means it keeps the joints in the proper position. Those who get enamored with flat bench and at the same time ignore their upper backs end up with a humped-over posture.



**To target the neck and upper back, Bill Starr recommends you attempt to pull the bar as high as possible in every clean or snatch high pull. Full extension (Frame 1) is key.**

This issue is often seen in bodybuilders and powerlifters who are only interested in improving their arms and chest and only do deadlifts rather than any form of high pulling. This creates disproportionate strength in the shoulder joints and will affect all the upper-body movements. Unchecked, it will eventually lead to severe pain in the shoulders, usually in the rear-deltoid range. This disparity in strength needs to be corrected before it becomes a serious problem.

There are a number of excellent exercises an athlete can do to strengthen his upper back and at the same time make his neck stronger: power cleans, power snatches, clean- and snatch-grip high pulls, and shrugs. Naturally, full cleans and snatches fit the bill as well. For those who are still actively taking part in a competitive sport, the more dynamic the movement, the better. That means including power cleans, high pulls and shrugs in the weekly routine. For those who are past that stage but are still able to get away with an explosive lift, I suggest both clean- and snatch-grip high pulls and dynamic shrugs.

When athletes get into their 40s or early 50s, they often have difficulty doing power cleans. This is usually due to

some problem in one shoulder or the other, or in some cases it's their elbows that complain when the bar is racked across the frontal deltoids. In this case, try power snatches. They are especially good for enhancing strength in the upper back due to the fact that the bar has to be pulled considerably higher than in any other pulling exercise. And the rack is much easier on the shoulders and elbows because the athlete is simply locking out his arms at the finish, which is usually much less stressful to the shoulder girdle. The only downside to power snatches is that less weight is used than with the power clean.

That's where high pulls come in nicely. Once you have mastered good form on either the power clean or power snatch, high pulls are easy to learn. They are extremely beneficial to making the upper back strong because they overload those groups involved. The hardest part of learning correct technique on the two forms of high pulls is the transition from the deadlift phase to the high-pull phase. It has to be done smoothly with no hitching whatsoever. While high pulls are really no more than a deadlift followed by a shrug, making that transition takes a great deal of practice. In fact, this is one of the hardest lifts to learn in strength training.

The best way to work high pulls into your routine is to do either power cleans or power snatches first, then move right into the high pulls. With the longer pulling motions and the relatively lighter weights used on the power movements, you can step right in and do the high pulls much more easily.

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Use straps on the high pulls. You may not need them with light weights, but once you start piling on the plates, you will. Your eventual goal should be to handle 75 lb. more in the clean high pull than you're able to power clean and 50 lb. more in the snatch high pull than you can power snatch. Naturally, you're not going to be able to do this right away because it takes considerable practice to master the high pulls.

The key to making the high pulls useful is to always seek more and more height. You can never high pull a bar too high. Fully extend on every rep, and this will activate more muscles in your upper back and shoulders than if you merely nudge it upward. Even with your lighter, warm-up poundages, pull the bar just as high as you possibly can. For the first couple of sets, you may find the bar soaring up over your head. Excellent! That's exactly what you want. When you really extend high on your toes with your elbows up and out, you'll feel it in your neck and traps the following day. That's when you know you're doing the pulls correctly.

Even if you can't power clean, do clean high pulls. Doing several different exercises is much more productive than choosing just one because they each attack the upper back and shoulders in a slightly different manner. For example, the snatch-grip high pulls hit the wider part of the traps and the lats in a different fashion than the clean-grip high pulls do. I suggest alternating them every other time you do them.

Power cleans and power snatches are best done in sets of 5 for 5 reps, but for those having trouble getting the feel of power snatches, I lower the reps to 3. High pulls, other than for the lighter warm-ups sets, should be done in triples as well. The lower reps will allow you to concentrate more fully on the smaller form points. What you do not want to do is pick up bad habits while learning how to do either power movement or the high pulls. Habits are often tough to get rid of, so it's better not to pick them up in the first place.

In the beginning, do 5 sets of power cleans or power snatches, and follow with just 3 sets of high pulls. I've had some lifters who like to follow power cleans with wide-grip or snatch high pulls and place clean-grip high pulls behind power snatches. Whatever fits your mood is fine, just be sure to use correct technique and work them hard.

### **Shrug Big Weight**

Once you have mastered the form on power cleans and clean high pulls, shrugs are a snap. It's exactly the same line of pull, and you still want to pull the bar just as high as you can on every rep. The biggest difference is the amount of weight on the bar. For shrugs to have the desired effect, you must really load up the bar. The goal I set for my male athletes is for them to be able to give a jolt to 495 for 5 reps on their final set of shrugs. That's five 45-lb. plates on each end of the bar plus the bar itself. I tell them this is well within their reach at the end of the off-season program, which lasts approximately four months. While some beginners are skeptical, I point out that the only ones who failed to reach that goal were those who had some sort of injury that kept them from being able to do heavy shrugs.

One of the things strength athletes learn rapidly is that the traps respond to direct work very quickly. In just one off-season program, I've had athletes go from having such poor upper-back development that it hurt them to hold the bar on their upper backs when they squatted to sprouting mounds that made them look like Brahma bulls.

But to get such an impressive set of traps, you have to do as I said with the high pulls: extend the weight upward just as high as you can. I also have my athletes use clean and snatch grips for these, and, of course, you will need straps so you won't have to be concerned about holding onto the bar when the weights get really, really heavy.

Because shrugs are done inside the rack, you may end up hitting the crossbar of the rack on your first couple of sets. I encourage this because it sets the pattern for all the



reps that come later. When three, four, and five plates have been added, the bar will go nowhere near that high, but if you're still trying to gain more and more height on every rep, those muscles and attachments doing the work are going to get much stronger than if you merely give it a half-hearted effort.

If you fully apply yourself on the shrugs, your traps should get sore after every workout. I mean every single time you do them. When I was still competing in Olympic lifting and powerlifting, and later on when I just trained for strength, I did heavy, dynamic shrugs every Friday. This covered right about 40 years, and my traps got sore every single time. Sore traps are the best feeling in the world to me. In truth, getting any muscle group sore makes me happy. Strange maybe, but it works for me.

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These movements will greatly increase both size and strength in your upper back. They form the foundation for further development in the all-important neck. Without that base, progress will come much more slowly in the neck department, so spend some time getting those upper-back shoulder muscles just as strong as you can. That will allow you to really attack the neck right away.

### Targeting the Neck

Here are some exercises I recommend for strengthening the neck. No. 1 on my list is the wrestler's bridge, so named because all wrestlers do a great deal of them. Without a strong neck, a wrestler is at a great disadvantage, so bridges are a part of every workout. These can be performed on the front and the back. If you haven't done any specific neck work for a long time, ease into these.

Place a thick towel or pillow on the floor, and lie on your back with your head on the cushion. Arch up so that your weight is on your heels and the back of your head. In the beginning, you can keep your hands on the floor to help with your balance and take some pressure off your



Mike Warkentin/CrossFit Journal



Mike Warkentin/CrossFit Journal

*As in high pulls, full extension is necessary in the shrug. In shrugs, the bar will not go as high because the loads are much greater.*

Mike Warkentin/CrossFit Journal



**To scale this challenging movement, start with the knees on the ground rather than just the toes.**

Mike Warkentin/CrossFit Journal



**If the wrestler's bridge is too much for your neck at first, start with your hands on the ground for support.**

head until you get used to the rocking back and forth movement. Try to increase your range of motion a bit more each time you do them.

The frontal bridge is done with your forehead on the cushion and your toes on the ground. Again, if you haven't had any neck work in your program for a while, start out easy on your knees rather than on your toes. Rock back and forth until you feel your neck muscles begin to complain. As you're only going to be able to do perhaps a dozen or so the first few times you do either of these exercises, do several sets to get in a sufficient amount of work. Many

of my athletes preferred to do these apart from their workouts, later on at night and on their non-lifting days. The good thing about these movements is that you can do them anywhere and without any assistance.

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Steadily increase your reps. As you progress to doing 75 to 100, take your hands off the floor for the rear bridges and clasp your hands on your midsection. Likewise, remove your hands off the floor for the frontal bridges in order to put more pressure on your neck.

Another specific neck exercise that I favor does need someone to help you perform it. It's basically dynamic tension with a training mate providing the resistance. Place a folded towel on your forehead and have someone



## Neck ... (continued)

push down on the towel as you resist the pressure placed on you. Go easy at first or you will end up dinging your neck. When your teammate has pushed your neck down as far as it can go, he needs to release most of the pressure so that you can bring your neck back to the starting position—but not all the pressure; just enough so that you can bring your head back. You should have to work hard to do that. At the finish, your chin will be touching your chest. Do as many reps as you can handle, then roll over on your belly and do the same movement while facing the floor.

As your training mate attempts to push your head down you will, in turn, do your damndest to prevent him from moving your head at all. But unless you're very advanced in the neck-muscle category, he will always win. When he has pushed you down to your end range of motion, he will let up just enough so that you can extend your head up and back again.

The best thing about these is that you can also work the sides of your neck, which really can't be done with

wrestler's bridges. Same deal: lie on your side with a towel above your ear, and have your training mate apply pressure while you resist him. After you've done front and back and both sides, you will have worked all the muscles of your neck very thoroughly.

For all these exercises, use caution and stay within natural ranges of motion. Your partner should not be overly aggressive with the towel. Use common sense at all times.

A neck harness is also an excellent way to strengthen all the neck muscles. They used to be popular with bodybuilders, who knew the importance of having muscular necks. Harnesses can be purchased in stores that specialize in weight equipment, and it's easy to figure out how to work all the parts of your neck with a harness. It's also a great deal less stressful than bridges or the dynamic tension movements with a partner. In fact, I'm trying to track one down for my personal use.



Mike Warkentin/CrossFit Journal

*This exercise is meant to be done under control, and athletes should not exceed natural ranges of motion.*

The first time I saw this next piece of equipment, I thought the guy who had devised it was a bit loopy. But after watching him use it and thinking about how it worked, I changed my opinion of him and understood that he had come up with a simple way to make his neck stronger. His name was Bill Barnholth, and he was related to the legendary Barnholth brothers of Akron, Ohio: Larry, Lewis and Claude. They were the founders of the American College of Modern Weightlifting, which produced the great George brothers—Pete, Jim and George.

On the top of a football helmet, Bill had inserted a dumbbell handle. Onto this he put 2.5-, 5- and 10-lb. plates, then secured them with a dumbbell collar. Then he would sit on a bench, grasp its side to steady himself and proceed to work all four sides of his neck by turning the weighted helmet front and back and side to side. The simplicity and effectiveness of the device was pure genius, and there's no reason why you can't rig one up yourself and put it to use.

### The Neck and the Older Athlete

Now I want to turn to the older athletes who are not able to do the exercises I recommended because dynamic movements irritate their joints way too much.

However, you can still shrug, only the reps have to be done slowly, not explosively. I suggest starting out with dumbbells. Twenty pounders will be heavy enough. Two sets of 20 for starters. Elevate your traps slowly and squeeze them tightly as the end of each rep. At the end of the set, you should be able to feel it in your neck and traps, and if you worked them diligently enough, those muscles will be a bit sore the following day. If you have a wide selection of dumbbells to choose from, slowly move up to the 25 pounders, then 30s, 35s and so on. Should you only have a couple of sets of dumbbells at your disposal, run the reps up, way up. When you can do two sets of 100 with your heaviest dumbbells, switch over to using a bar and add plates as you get stronger. But stay with the high reps, all done deliberately and with a contraction at the finish of each rep.



Mike Warkentin/CrossFit Journal

*The key to the shrug is a very deliberate squeeze of the traps at the top of the rep.*



These, you will discover, are much harder than conventional shrugs, because they require more time and more concentration because of the high number of reps. But they will get the job done if you put enough energy into the exercise.

I have a friend who is a bit older than I am, and he started out using 10-lb. dumbbells for 20 reps for his shrugs, and the last time I talked to him he was shrugging 155 for two sets of 150 twice a week. He also added to his trap work by doing a shrug after each rep when he did deadlifts. Another older athlete I correspond with cannot squat with a bar because his shoulders no longer allow it, so he uses dumbbells, and at the end of each squat he does a shrug.

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**Do something specific every day  
for your neck.**

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Older athletes can benefit from dynamic-tension exercises as well. They don't need any assistance because they can apply the pressure themselves. That's really the case for all dynamic-tension movements. To work the front neck muscles, place a hand, or both hands, on your forehead and resist your head from moving forward and downward. Squeeze against this resistance until you reach the end range of motion, then fight against it again as you return your head to the starting position. The same thing applies for the sides and back of your neck. You can do these while watching TV. They only take four or five minutes to do, and once you learn to really lean into them, they will produce the desired results.

I also encourage older athletes to try and do some bridges. Almost everyone can do frontal bridges if he stays on his knees.

Do something specific every day for your neck. If all you can do are dynamic-tension movements, work them consistently and slowly increase the reps. Start out conservatively on all the exercises for your upper back and neck for two reasons: it will help you find out if an exercise irritates your neck more than it benefits

it, or perhaps the shrugs, even when done with a light weight and very deliberately, still hurt your shoulders. And when you start out with a low rep count, you have someplace to go, because in the final analysis, it doesn't matter where you begin; it's where you finish.

Both younger and older athletes need strong necks. Start including some auxiliary movements in your routine for this critical body part and you just may end up saving your own life.



### About the Author

*Bill Starr coached at the 1968 Olympics in Mexico City, the 1970 Olympic Weightlifting World Championship in Columbus, Ohio, and the 1975 World Powerlifting Championships in Birmingham, England. He was selected as head coach of the 1969 team that competed in the Tournament of Americas in Mayaguez, Puerto Rico, where the United States won the team title, making him the first active lifter to be head coach of an international Olympic weightlifting team. Starr is the author of the books **The Strongest Shall Survive: Strength Training for Football** and **Defying Gravity**, which can be found at [The Aasgaard Company Bookstore](http://TheAasgaardCompanyBookstore.com).*