THE PULL-UP OR CHIN-UP

ABSTRACT

Did you know that new-born babies can hang from a bar for four to six seconds? We start our lives with amazing grip strength but lose it if we don't train those muscles.

The pull-up and chin-up can seem like daunting movements for some. However, with a few changes to the way we do the movements, they can be made easier and accessible for most people to do. Similarly, for those who find a strict pull-up or chin-up too easy, we can make modifications to add to the challenge.

The pull-up or chin-up is a great way to develop strength in the back, shoulders, upper chest, abs, biceps and forearms with very little equipment. They are a great strength builder for weightlifters and powerlifters, athletes from just about any sport or anyone looking to improve their overall fitness.

In this paper we will discuss the pull-up and chin-up, muscles used in the movements, benefits of doing them and variations to enable everyone to perform and improve the movements.

After reading this paper you will understand why you should include pull-ups and chin-ups in the training sessions you give to your clients or athletes. You will also know how to coach the movements effectively and how to make adjustments to make them easier or more challenging.

THE PULL-UP AND CHIN-UP

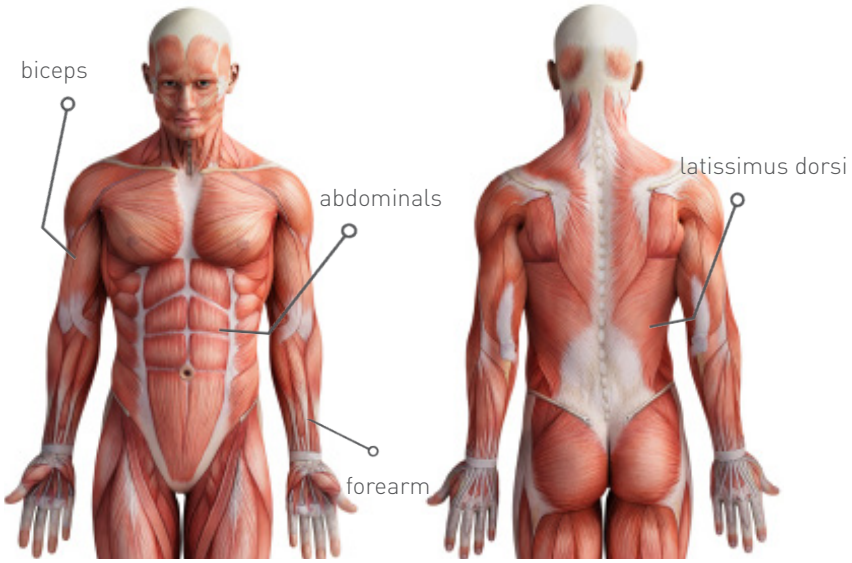
BENEFITS OF PULL-UPS AND CHIN-UPS

The benefits of the pull-up are endless. Your clients can do them with very little equipment and almost anywhere. You do not need a bar at an exact height or even a client that is able to do a strict pull-up or chin-up. You will be able to have your clients work several large and small muscles groups at once.

Pull-up or chin-ups increase forearm, grip, back, shoulder, upper chest and biceps strength. Each of these will benefit your clients in numerous other athletic movements. In the clean and snatch there are several phases that can benefit from muscles strengthened by the pull-up or chin-up (Del Rossi, 2017). The deadlift is another lift that is dependent on strong lats (Wenning, 2014).

Increased forearm and grip strength are often overlooked as a benefit of doing pull-ups or chin-ups. The initial pull in the pull-up and chin-up relies primarily on the forearm. There are numerous different ways the pull-up or chin-up can improve your forearm and grip strength (Derwin, 2013). Lacking forearm and grip strength could be what is holding a client back from their next personal record.

Your clients will not only get stronger and improve their lifts but also reduce the chance of injuries. You may see clients that, for aesthetic reasons, over train their chest and neglect their backs. This can be easy to spot as they will have rounded shoulders and poor posture. This can lead to many different minor and major injuries. Or, have you had clients with impingements in their shoulders? This injury can also be caused by overtraining the pushing muscles and neglecting those used for pulling. Studies have found most recreationally-active adults are stronger with their pushing exercises and this leads to an imbalance, which can cause injuries (Negrete, Hanney, Pabian, & Kolber, 2013).



MUSCLE GROUPS USED IN PULL-UP OR CHIN-UP

The biggest muscle engaged in both the pull up and chin up is the latissimus dorsi, commonly referred to as lats. This is the broad, long muscle that covers the backs of the ribs and middle of the back. The smaller muscles in your back are also engaged and assist your lats during the pull-up or chin-up.

The abdominal muscles, usually called the abs, are activated as they stabilize your core during the movement. The deltoids also give some assistance during the lift.

The last three muscles groups we will discuss are the biceps, chest, and forearms. The biceps muscles and upper chest are stimulated and work much harder during the chin-up (Youdas, et al. 2010). If your clients are looking to strengthen those muscles, they can focus more on the chin-up. The forearm muscles and hand muscles are used more than most people think in both the pull-up or chin-up.

COACHING THE PULL-UP AND CHIN-UP

A sturdy bar that will hold the clients body weight plus the additional force of them pulling on it is all that is required in terms of equipment. Many modern gyms have 'rigs' with purpose-designed pull-up areas. Power cages often have a suitable bar built in. The pull-up is typically done by grasping a fixed bar overhead, with a pronated grip (palms facing away from you), while hanging from the bar. The client then pulls themselves up until their chin is slightly over the bar. To finish the movement they will lower themselves back down to the starting position.

A chin up is the exact same movement but with a supine grip (palms facing towards you). The simple change in hand position allows you to target different pulling muscles.

Pull-ups or chin-ups can be done both as a strength or muscle endurance exercise. The sets and repetitions can vary but 3–5 sets of anywhere from 5–15 reps is a good guideline.

When starting the pull-up or chin-up exercise, a beginner will have a more difficult time getting higher numbers of reps, so they will need to do some of the reps in a modified form. We will look at some examples later. Do 3-5 sets, each time going until the client feels like they have 1-2 reps left. Then as they get stronger and they can complete 10-15 modified reps, you can try to incorporate 1-2 strict pull-up or chin-ups at the start of the set. You can use 5-15 as a good set of reps when you start incorporating strict pull-up or chin-ups. The goal is to increase your number of strict pull-ups or chin-ups and decrease the modified version.

THE STRICT PULL-UP OR CHIN-UP IS NOT A MOVEMENT THAT MOST CLIENTS WILL BE ABLE TO DO IMMEDIATELY... FORTUNATELY, THEY CAN BE MODIFIED FOR ALMOST ANY CLIENT.

The pull-up or chin-up can be added into a client's workout once to twice a week, with several days in between to allow for recovery.

VARIATIONS AND MODIFICATIONS OF THE PULL-UP OR CHIN-UP

Is the pull-up or chin-up a movement you have used with prior clients? Or have you avoided it, due to them not being able to do it?

The strict pull-up or chin-up is not a movement that most clients will be able to do immediately. If they can, they may not be able to do enough in a workout to benefit from them. Fortunately, the pull-up or chin-up can be modified for almost any client, whether they find it too hard or too easy.

There are numerous modifications and variations to adjust for the height of the bar and strength of the person. The following exercises will help those who are looking to strengthen the muscles needed to do strict pull-up or chin-ups.

JUMPING PULL UP

A jumping pull-up with a slow eccentric drop is a good exercise to start with. If the client cannot drop slow then just have them drop as slowly and safely as possible.

The bar you are using will need to be low enough that they have about a 45-degree bend in their knees, with their feet on the ground. If your bar is too high, find a sturdy weight bench, plyo box, or weight discs stacked on top of each other to move them closer to the bar.

If the bar is too low to start with, this is not a problem. You will have them bend their legs more but try not to allow them over compensate with the legs. The more bend in the knees, the more their legs will help with the drive up.

Once they are set up, have them grab the bar with either a pronated grip (pull-up) or supine grip (chin-up). As the client begins to pull up towards the bar, have them jump and use their legs to drive them. When their chin reaches a position slightly over the bar, have them lower their bodies back to the starting position as slowly as possible.

INVERTED ROW

An inverted row is another great way to build the muscles needed to perform a strict pull-up or chin-up. Studies show the inverted row builds strength in the majority of the same muscles as a strict pull-up or chin-up (Snarr & Esco, 2013).

The inverted row can be done with a pronated or supine grip to mimic either the pull-up or the chin-up. It is typically performed with a barbell on a rack because you will need the bar to be close to the floor.

The client will lie flat on the floor in the supine position (facing up), with their chest directly under the bar. Their hands should just barely reach the bar with their back on the floor. They should grasp the bar with a pronated grip (pull-up) or supine grip (chin-up). The client will then pull their chest to the bar and then lower themselves back down to the start position.

The more horizontal their body is, the harder the movement will be. If you need to make the movement less challenging, you can raise the bar and have their feet pulled in closer to the bar. To make the movement more challenging, you can again raise the bar but this time put their heels on a weight bench, to make their body parallel with the ground.

ADDING CHALLENGE

Some clients will come to you with the strength do strict pull-up or chin-ups and need something more challenging to enable them to get stronger. Your other clients will gain strength as they do the above modifications and variations. In order for them to continue to progress in their strength journey, they will need modifications to make the movement harder. The following two movements can be done by those who can successfully complete a pull-up or chin-up but are looking do more.

CHEST-TO-BAR PULL-UP OR CHIN-UP

This movement is done in exactly the same way as a strict pull-up or chin-up. The difference is where the client will stop pulling. Instead of them stopping with their chin slightly above the bar, they will continue to pull until their chest makes contact with the bar. They can then lower themselves back to the starting position.

The eccentric (lowering) part of the movement can also be changed to make this a harder movement. The slower they go the down, the harder the movement will be.

VARYING HAND POSITION PULL-UP OR CHIN-UP

One other simple way to improve your client's pull-up or chin-up is simple varying their hand position. They can move their hands wider apart or closer together on the bar. The movement of the pull-up or chin-up remains the same. This allows you to have them isolate the different muscles used in the pull-up or chin-up. The wider their hand placement on the bar the more focus on working their lats (Lehman, Bachan, Myers& Nalborczyk, 2004).

SUMMARY

In this paper we have discussed the pull-up and chin-up and how they can help us, the muscles required to do them, and how we can enable people at all levels to see improvement. This should resolve any misunderstandings about why pull-up or chin-ups are too hard. The pulling muscles strengthened by the pull-up or chin-up, will benefit your clients in many ways.

Take the challenge and incorporate these variations and modifications into your programming. It will improve your clients pull-up or chin-ups and overall pulling muscles strength.

If you are looking to help clients get stronger for their sport or just improve their fitness level, the pull-up or chin-up is well worth including. ■

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