



Fundamental Movements

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Disclaimer: Please consult with your physician before beginning if you have any concerns about your safety while doing physical activity. If you have any doubt, please complete a PAR-Q [here](#) and follow the appropriate recommendations.

Fundamental human movements come down to a basic core of movements. Likewise, weight training comes down to fundamental movements. If you master these movements, you will be able to safely perform most if not of all exercises. But remember, the purpose of weight training is to make activities of daily living easier. That means, if you master these 4 movements, daily chores and activities will be done easier, more efficiently and safer. These 4 movements include the push, pull, squat and lunge.

Push

Primary muscles involved:

- Pectoral muscles – chest muscles
- Deltoid muscles – shoulder muscles
- Triceps muscle – back of upper arm muscle

A pushing exercise occurs when you are pushing a weight away from your body, or pushing yourself up away from the ground as you do in a push up. Everyday, you perform a variety of pushing exercises. Whether you are pushing yourself up to get off the ground or up from a chair, picking something up and putting it at a higher height or pushing your grocery cart, they are all forms of pushing! Therefore, it is very important to understand how to push properly and to strengthen the associated muscles to ensure your activities of daily living are made easier.

Pushing can be in the horizontal or vertical plane. A vertical push primarily works your shoulder muscles while a horizontal push primarily uses your chest muscles. But between your shoulder, chest and triceps muscle, they all play a role in every push! And don't forget the core too! Need to have that stabilized trunk in order to generate power.

Pushing exercises can be done using your bodyweight, dumbbells, barbells, machines, and all other forms of resistance training equipment. A pushing exercise may be difficult to some for many reasons. Sometimes the accessory muscles such as your shoulder or triceps muscles may be weak. Often as well, the person has poor mobility due to a poor daily posture. If you can't move properly, you can't generate power. It may also cause pain such as an impingement in your shoulder which is often alleviated with targeted stretching and mobility exercises for the muscles around your shoulder joint.

Whether vertical or horizontal there are a few key points to remember.





How to perform:

- Keep your shoulders down and back, try not to allow them to shrug
- Push until your arms are straight, always lower slowly
- If possible, have your back supported or ensure your back is straight to avoid a potential injury
- Breathing should be in as you push, and out as you come back to the starting position

Pull

Primary upper body muscles involved:

- Latissimus Dorsi – big back muscle
- Rhomboid and trapezius muscles - upper back muscles
- Biceps muscle – front of upper arm muscle
- Wrist flexors – forearm muscles

Primary lower body muscles involved:

- Hamstrings

In terms of pulling, we will focus on the upper body but I just wanted to mention that our hamstrings are responsible for the pulling action of our lower body. Often the hamstring is very tight from sitting which causes our pelvis to twist leading to low back discomfort. The hamstring may also be disproportionately weaker than the quadricep muscles and cause an imbalance and pain at your knee as well. Athletes often pull their hamstring as it is used in your sprinting and running as well as slowing down. Keep it mobile and flexible!

Back to our upper body. Your pulling muscles are primarily located in your back. Pulling exercises will also recruit your biceps muscle and forearm muscles. The pull is essentially the opposite of the push; pulling a weight towards your body or your centre of mass towards an object as seen in a pull up or climbing. Daily activities such as opening a door or pulling on your dog's leash all require your pulling muscles. Pulling may be down in the vertical or horizontal plane as well. Pulling exercises can be done using your bodyweight, although quite difficult, but by using dumbbells, barbells, machines, or other types of equipment, pulling exercises are easily achieved.

Working and strengthening these muscles are essential for a good posture. When you have a bad posture, these muscles are often lengthened and weak fostering into a continued poor posture. Not incorporating pulling exercises into your routine will lead to muscle imbalances and future injury. Poor posture and tight immobile muscles make pulling exercises for difficult. To negate some of the effects of poor posture, try rotating your palms to face each other or face your body while performing the movement.





How to perform:

Whether vertical or horizontal there are a few key points to remember.

- Grip may vary from narrower or wider than shoulder width
- You want to maintain your shoulders down and try to squeeze your shoulder blades
- Do not allow the weight to pull your shoulder blades up or forward
- Pull as far as you feel comfortable, usually around your body and release only as far as your arms extend
- Breathing should be in as you pull, and out as you release

Squat

Primary muscles involved:

- Quadriceps – front of thigh
- Gluteal – bum muscles
- Calves – back of lower leg

Squats are important and a fundamental because without the ability to do a squat like pattern, you would not be able to get out of a chair! When I teach my clients how to do a squat, one of the first things I explain is “push your hips back as if you are sitting in a chair, bend the hip before you bend the knees”. Being able to do sit to stands is essential for independence. If we lose this ability as we age, it can very negatively impact our quality of life.

Squats are the push of your lower body. With both feet planted on the ground and weight on your heels, you bend your hip and knees to lower your body while maintaining a straight and upright chest and back.

Squats can be done with simply your bodyweight or with dumbbells, barbells, machines, kettlebells, etc. Essentially any form of equipment! Squats also help build your core as with each repetition, your lower back and abs contract to keep body upright as the body is lowered.

Some people find it difficult to perform squats. The most common reasons are due to tight hip flexors, tight calves, reduced lower body strength and poor balance. Tight hip flexors will cause your upper body to really come forward as you lower down, and tight calves make it hard to go low without your heels coming off the ground. Therefore, adding stretches for your hip flexors and calves in your daily routine can be very important.

Also, remember that you do not need to use weight or to go to 90° your first time doing it. Progress slowly at your own pace. Start with a chair behind you for you to sit on or a chair for balance. Start with a semi squat and build to lower depths. Exercises are always about progression! No one is perfect at the beginning, start slow and build in a safe and effective manner!





How to perform:

- Stand with your feet approximately shoulder width apart
- As you begin to lower, push your hips back before you bend your knees
- Lower your hip while maintaining a straight upper body
- Do not let your knees track past your toes
- Lower yourself as far as you feel comfortable, do not want pain
- To push up, push through your heels to engage your hip muscles
- Breathing should be in as you lower, and out as you rise up

Lunge

Primary muscles involved:

- Quadriceps
- Gluteal

Whether you know it or not, you do lunges every day! Stepping over an obstacle, reaching for something, during sport, essentially any time you take a longer step than your standard stride length, you are doing a lunge! Basically, a lunge is a single leg exercise where the forward leg bends and the back leg remains stationary. A lunge is dynamic as it can be performed forward, backward, to the side or on an angle. It can be done up or down from a height or with your back leg elevated. Each variation challenges your muscles in a slightly different way.

Similar to squats, lunges can be done with your bodyweight or with dumbbells, barbells, machines, kettlebells, etc. for added resistance. Tight muscles such as the calves, hip flexors, glutes and hamstrings may impact your squat so stretching your lower body consistently will help improve your lunge.

How to perform:

- Stand with your feet approximately shoulder width apart
- Take a step with one leg (will depend what direction / type of lunge you are doing)
- Your front knee should bend to around 90°
- Do not allow your front knee to track past your toes
- Maintain a straight upper body
- Lower yourself as far as you feel comfortable, do not want pain
- To push back to your starting position, push through your heels to engage your hip muscles
- Breathing should be in as you lower, and out as you rise up

By incorporating these 4 movements into your exercise routine, you will be making activities you do every day that much easier. There are many variations and exercises you can do with many progressions and regressions as needed so find an appropriate starting point and progress! Have fun, enjoy and ask me any questions you have!

