Gain

Muscle

Guide

by Steph

Intro

In this guide, I'll show you the method I use to gain strength and muscle. It's a type of training use by pros and even Olympic athletes. I use basic exercises and when you use the base, It's effective. That's what you want, right ? Gain strength, muscle and lose fat to have a better body.

Planning

Yes, planning is necessary to track you evolution. A calendar or an organizer is important to plan changes in your workout because your body is made to fit any situation. In this guide I use the word periodization (sport perdiodization).

Periodization is the systematic planning of athletic or physical training. The aim is to reach the best possible performance in the most important competition of the year. It involves progressive cycling of various aspects of a training program during a specific period. Conditioning programs can use periodization to break up the training program into the off-season, preseason, inseason, and the postseason. Periodization divides the year round condition program into phases of training which focus on different goals.

In this guide, there is 2 types of changes to do every 2 months: add 2 reps or add 2kg (5lbs). Here an example:

You took a new resolution for the new year to have a better body. So, you start to train in January. **January** is **Periodization A** and you find the right weight to be able to do 6 reps with a good technique for all exercises. **March** is the **Periodization B** and you add 2 reps for all your exercises (you do 8 reps and you keep the same weight). **May** is the **Periodization C** and you add 2 reps for all your exercies (you do 10 reps and you keep the same weight). **July,** is **Periodization A** and decrease the number of reps to 6 reps and you add 2kg (5lbs) for all your exercises.

When you add weight, you need to decrease the reps number to 6 reps to handles these new weights. The key is to perform all the exercises with a good technique to avoid injuries. It's better to use a medium weight and do an exercise with a good technique than use the heaviest weight possible and have a bad technique.

As you can see, there are 3 periodization:

- Periodization A: 6 reps
- Periodization B: 8 reps
- Periodization C: 10 reps

When you add weight (2kg/5lbs) you start a new perdiodization:

- Periodization A: 6 reps
- Periodization B: 8 reps
- Periodization C: 10 reps

When you add weight (2kg/5lbs) you start a new perdiodization

- Repeat

Generally you add weights each 6 months but it's possible than you can increase faster the reps number or weight, it'up to you. The most important thing is to listen to your body. If you feel you need to increase or decrease the reps number of the weight, do it. Planning can always be modified to adapt to your evolution.

Ego

I know when you train, you see people around you lift heavier weights than you or you want to impress someone but it's a bad idea. It's an ego trip and an ego trip can help you to destroy your progress with an injury because you use a weight that is too heavy. You don't know if the people around you have been training for 5 years or if they're professional athlete. If you want great progress, leave your ego in the locker room and stay focus on your workout program.

Track your evolution

Track all your workout sessions is crucial to see how your body evolves. Sometimes, you look in the mirroir and you have the impression that you haven't made any prodress or your friends don't see your evolution, but the truth is that if you are consistent, you progress. Every day you can see what you did 6 or 3 months ago and this is proof of your evolution. These proofs are excellent for keeping your motivation, increase your confidence and your self-esteem.

To track you workout sessions, you can use a notebook, a spreadsheet sofware, etc. When I started, I used a paper and a pen and when I came home, I copied my performance to an Excel file. For around 2 years, I use an app on my smartphone, it's Jefit (https://www.jefit.com) and I save my performance after each exercise.

Each month, I track my weigth, my measurement, my body fat% and I take a picture. I still use a spreadsheet file to track everything. It's possible to track your weight, measurement, body fat% and picture with a fitness app on your smartphone but I like to have a backup file with a spreadsheet file and pictures.

I use this tool for my measurement, it's a body tape mesure tool:

And this tool for my body fat %, it's a body fat caliper:

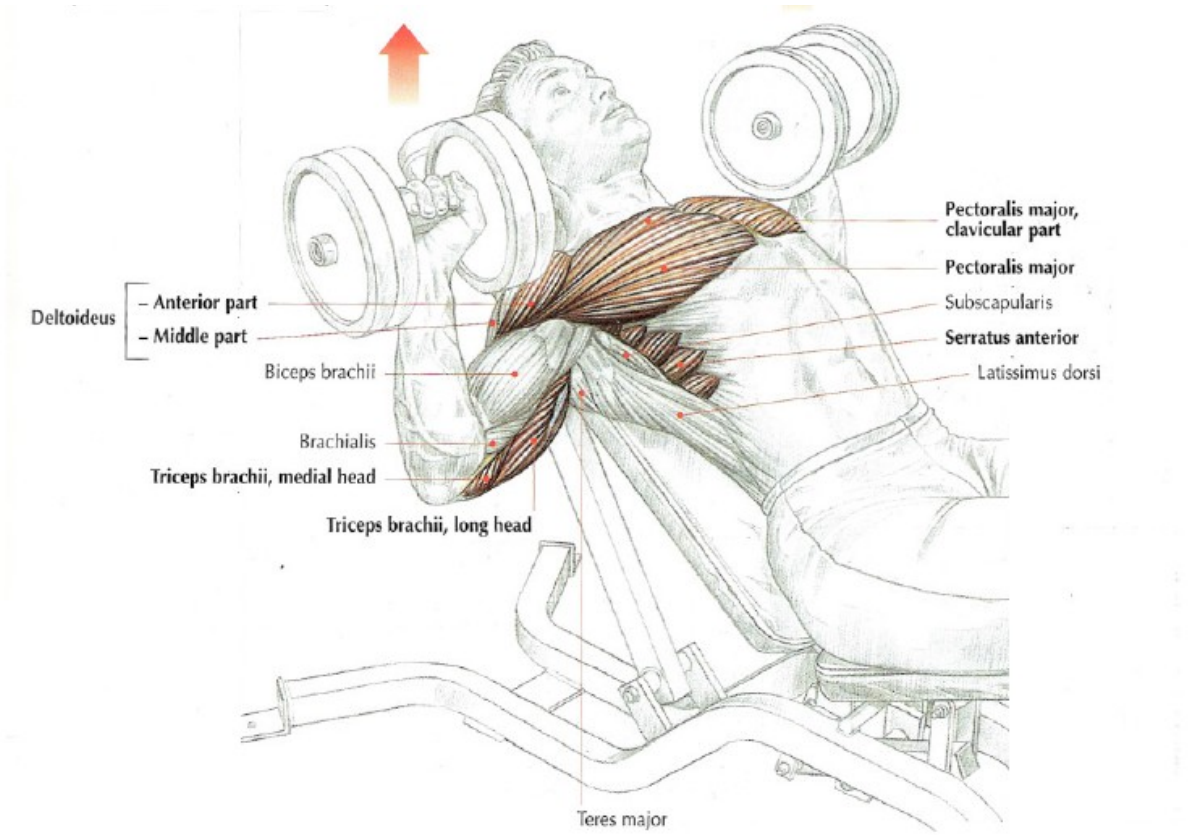
Stay focus

This will help you to reach 3 goals: increase your strength, increase your muscles size and lose your fat. To stay motivated during your workout, create your music playlist in your MP3 player or your smartphone to be focus to the maximum. With your music playlist, you will be in your zone, in your bubble to do exercises with a good technique and recover well between sets. This is not playtime here, you're here to have results.

WORKOUT PROGRAM

DAY 1 (CHEST, TRICEPS, CALVES, FOREARMS)

Incline Dumbell Press



Sitting on an inclined bench (no more than 60° because you don't want to work only your deltoids) with your elbows bent. You have a dumbbell in each hand with a pronated grip.

- Inhale and extend your arms vertically by bringing the dumbbells closer together
- Exhale at the end of the movement.

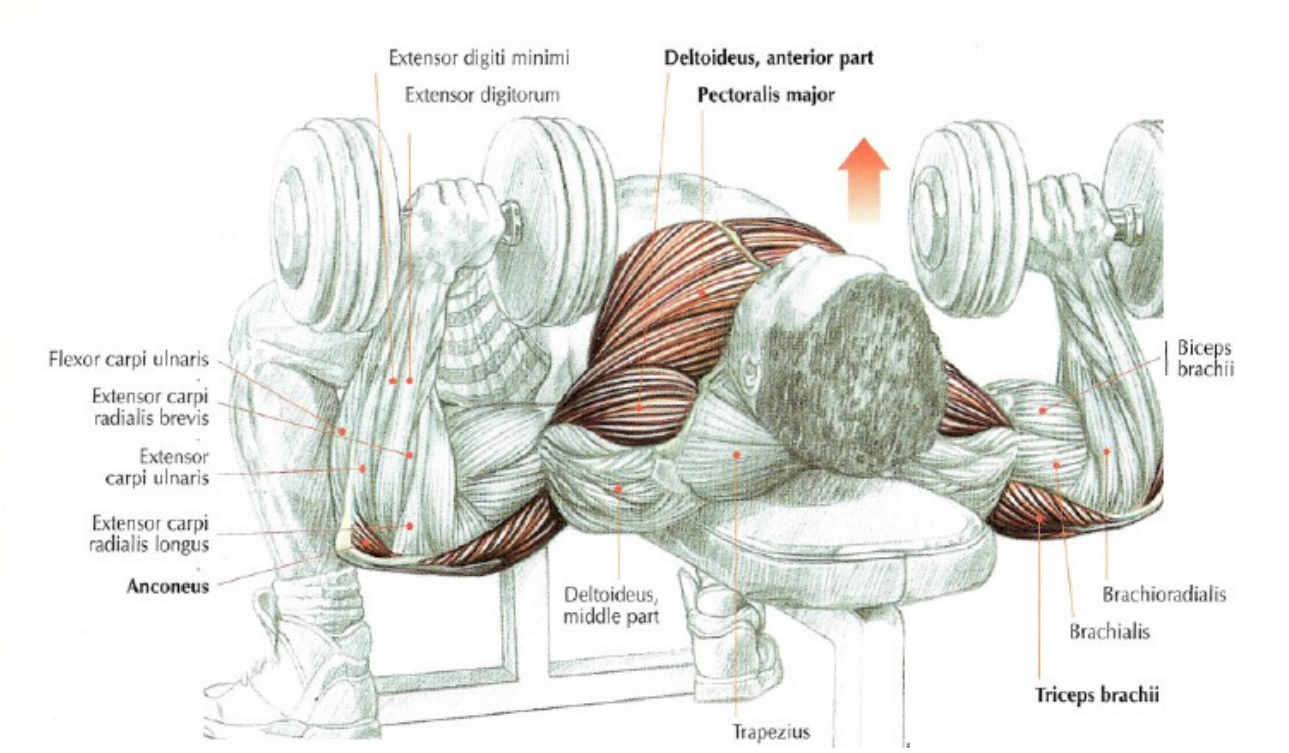
This exercise mainly works the upper part of pectoralis major (upper chest) and a little bit anterior deltoid, seratus anterior and pectoralis minor. Seratus anterior and pectoralis minor stabilize the scapulae, allowing the arm to work with the torso. Triceps work less intensely that with barbell.

This exercise is between incline barbell press and dumbbell flys. It's a movement which works the upper part of the pectoralis major and it also stretches the muscle because of the amplitude of the movement.

Variant

You can have a starting position with a pronated grip and when you extend your arms, you rotate so that your palms of your hands are face to face (neutral position).

Dumbbell Bench Press



Lying on a horizontal bench with your feet on the ground to stabilize you. Hold the dumbbells with arms outstretched and your hands are face to face.

- Inhale and lower the dumbbells to your chest's level. Bend your elbows and rotate your forearms to have your hands in pronated grip.

- Press the dumbells back up and do an isometric contraction to isolate the stress on the upper chest. Exhale at the end of the movement.

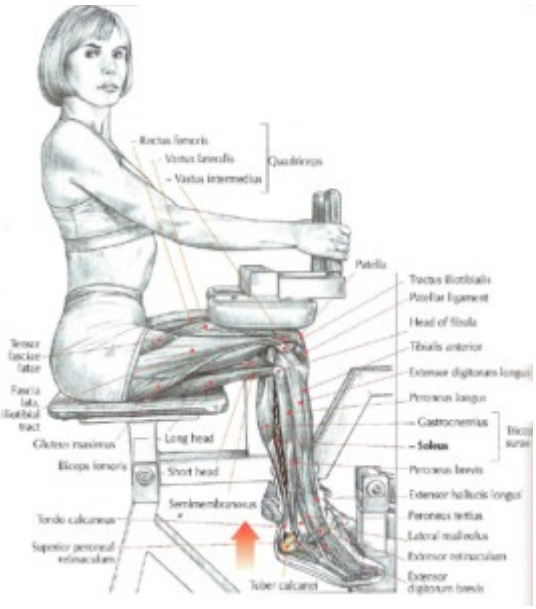
This exercise works the pectoralis major and a little bit triceps and anterior deltoids.

The difference of this exercise with the barbell bench press is that there is a greater movement's amplitude, which favors the stretching of the pectoralis major.

Variant

You can do this exercise without forearm's rotation.

Seated Calf Raises

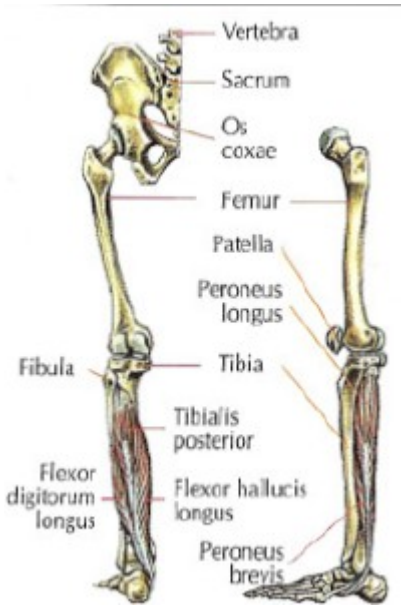


Sitting on the machine with the bottom of your thighs under the pads. Your forefoot on the step with your ankles in passive flexion :

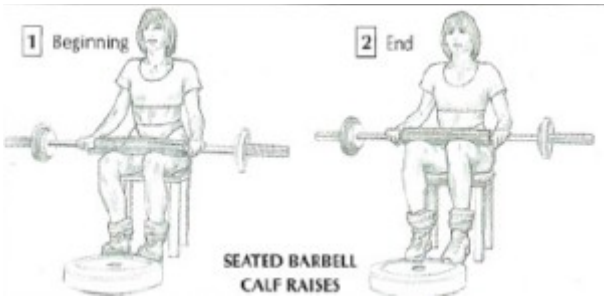
- Do an extension of your feet

This exercise mainly works soleus (this muscle named like that because it looks like flat fish, the sole). This muscle inserted above the knee joint, on the tibia and fibula. And it's also attached to the calcaneus by the Achilles tendon. The soleus has the function of extending the ankles.

The flexed position of the knees relax gastrocnemius who are attached above the knee joints and below the Achilles tendon. In this position, they participate weakly in the extension of the feet.

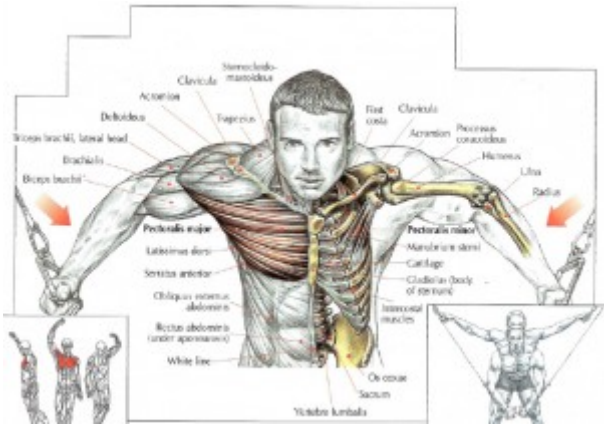


Variant



It’s possible to do this movement sitting on a bench with a step under your feet and a barbell on the bottom of your thighs. Use a towel or a barbell pad to have less pain on your thighs while performing the exercise.

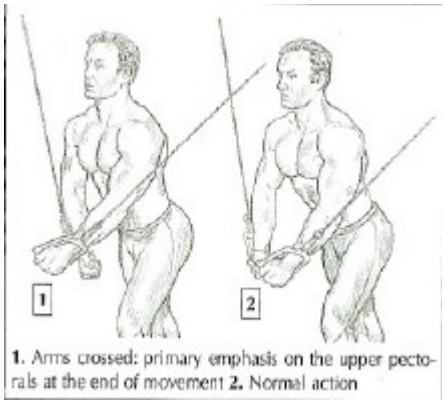
Cross Crossover Flys



Stand with your legs slightly apart and your torso in little inclined. Your arms spread with your elbows slightly bent on the pads and a handle in each hand :

- Inhale and tightens your arms to bring the handles in contact
- Exhale at the end of the movement and returns to the starting position by controlling the movement.

This exercise works the pectoralis major. By changing the torso’s inclinaison and the angle of your arms, you can work the entire pectoralis major.

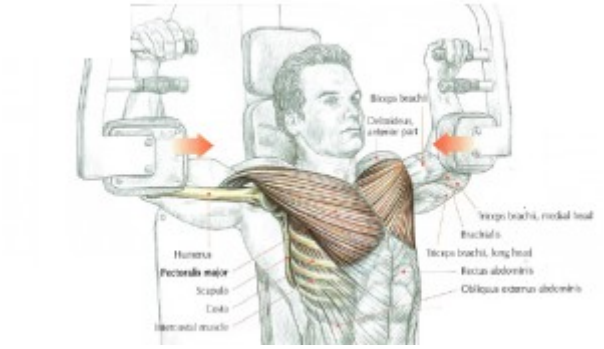


1. Arms crossed: primary emphasis on the upper pectorals at the end of movement 2. Normal action

Note

This exercise work the pectoralis minor under the pectoralis major. The pectoralis minor's function is to stabilize the scapulae (shoulder blades) and projects the shoulder forward.

Pec Deck Flys



Sitting on the machine with your arms spread horizontally. Your elbows are bent on the pads with your forearms and wrist released :

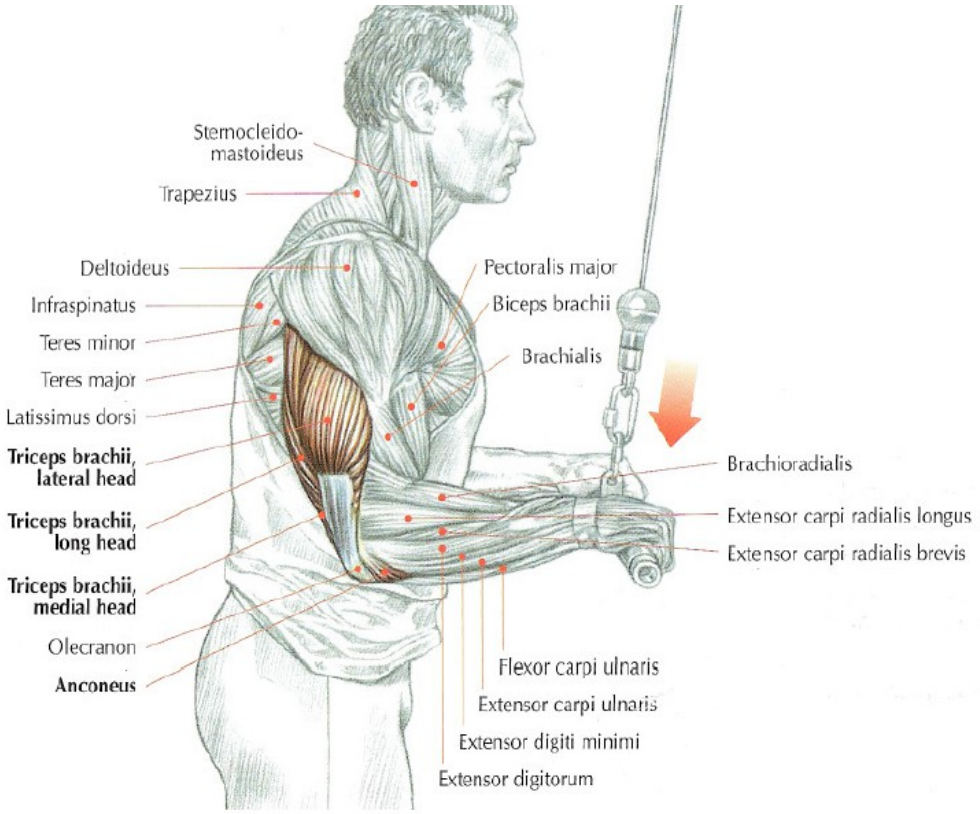
- Inhale and tighten your arms to the maximum
- Exhale at the end of the movement

This exercise works the pectoralis major by stretching it and a little bit coraco-brachialis and biceps short head. When the elbows brought together, the effort is in the sternal part of the pectoralis major.

With high reps, you can have intense pump.

This exercise is excellent for beginners to build strength to then do more complex exercises.

Pushdowns



Standing in front of the machine with your hand on the bar with a pronated grip. Your elbows are along of your body. Your arm must be do a « L » :

- Inhale and make an extension of your arms making sure not to spread your elbows of your body.

- Exhale at the end of the movement

This exercise works triceps and anconeus muscles.

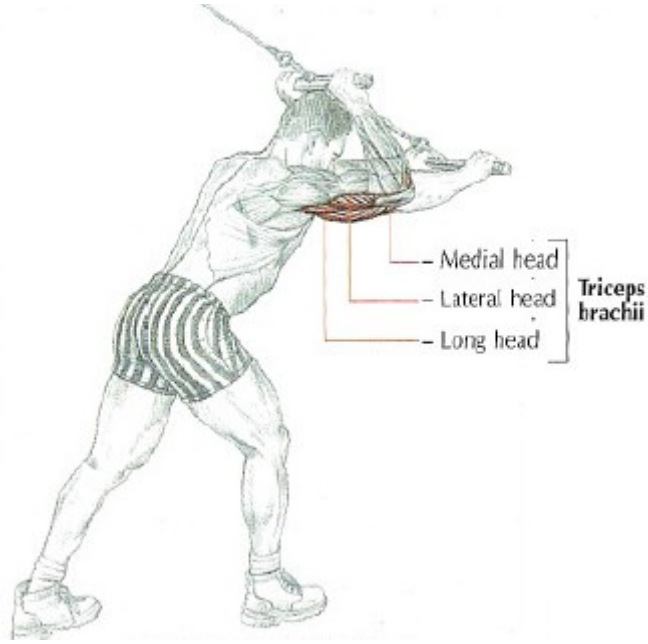
Variants

- You can use a rope to work more intensely the lateral head of the triceps.
- You can also do this exercice with a supinated grip to work the medial head of the triceps.
- You can have an isometric contraction by hold the extension for one or two seconds at the end of the movement to feel the effort.

If you use a heavy weight, bend a little bit forward to have a better stability .

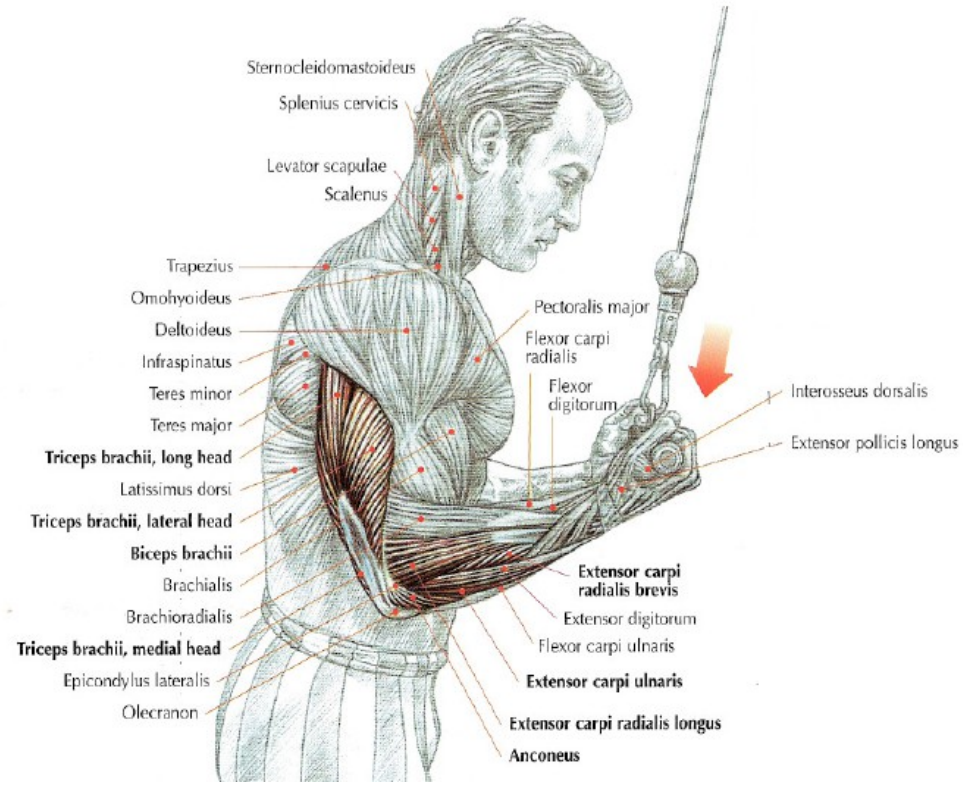
This exercice can be done by beginners to have enough strength to do more complex movement after.

Variant: back in front of the machine



This variant allow to feel more the effort of the lateral head of triceps.

Reverse Pushdowns



Standing in front of the machine with your hand on the bar with a supinated grip. Your elbows are along of your body. Your arm must be do a « L » :

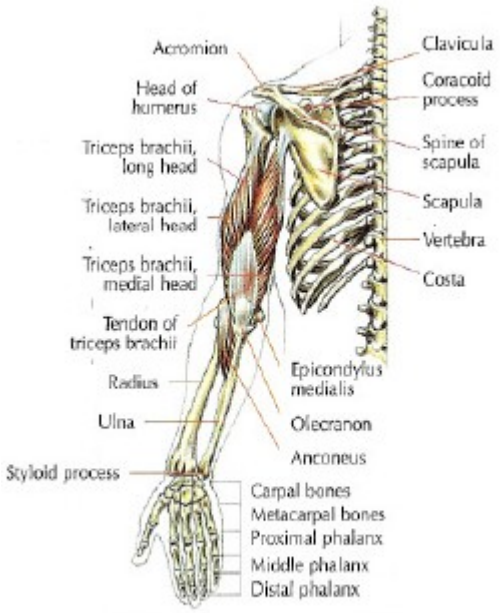
- Inhale and make an extension of your arms and be sure not to spread your elbows of your body.

- Exhale at the end of the movement

The supinated grip doesn't allow you to work with heavy weights then this exercice is done with light weights.

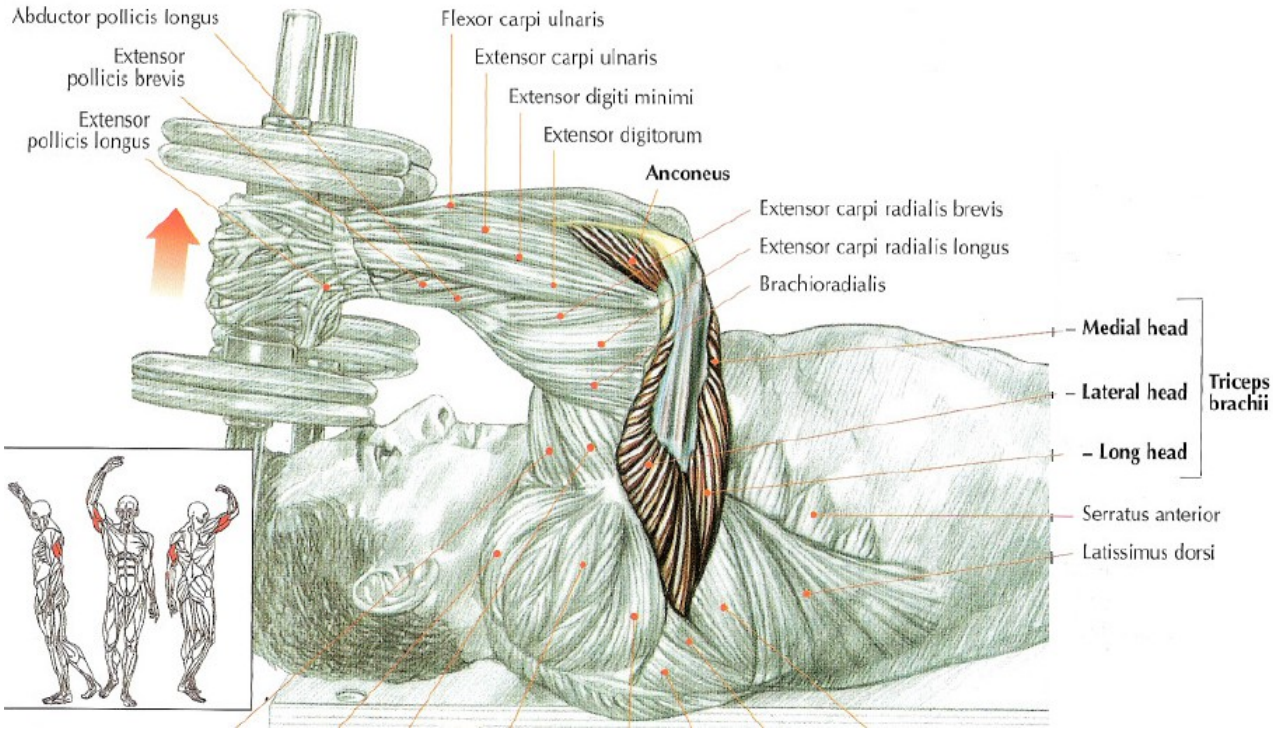
This exercise work triceps and the medial head.

When you do the extension of your arms, you work also anconeus muscle and wrist's extensors.



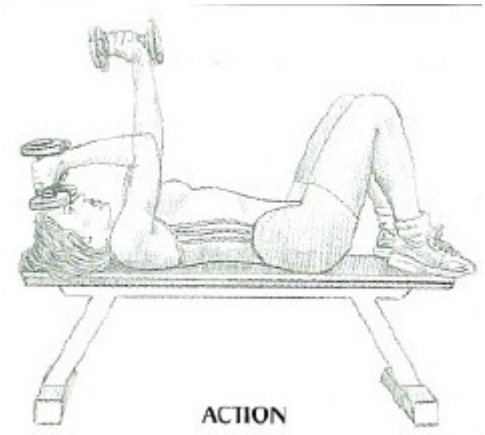
The wrist's exensors (extensor carpi ulnaris, extensor digitorum, extensor digiti minimi, extensor carpi radialis longus and extensor carpi radialis brevis) keep your wrist straight by an isometric contraction during the movement's execution.

Dumbbell Triceps Extension

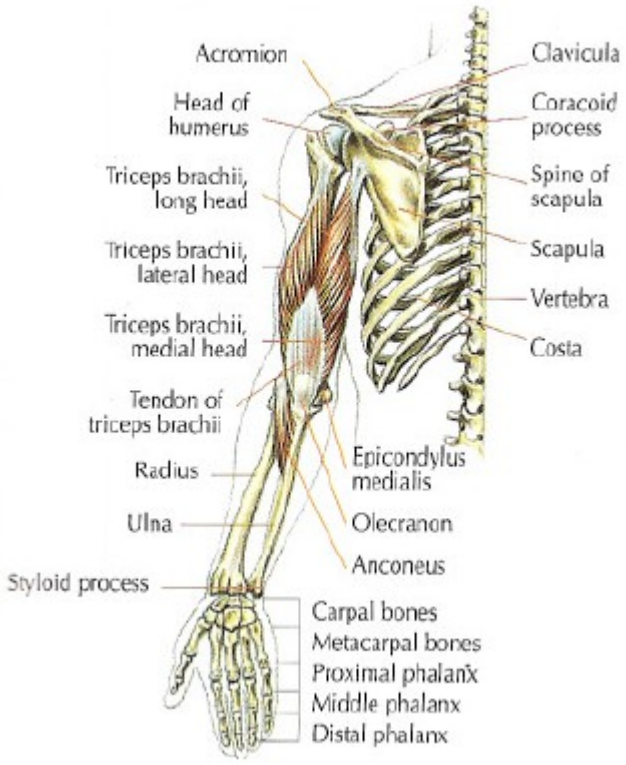


Lying on a bench with a dumbbell in each hand and arms in vertical :

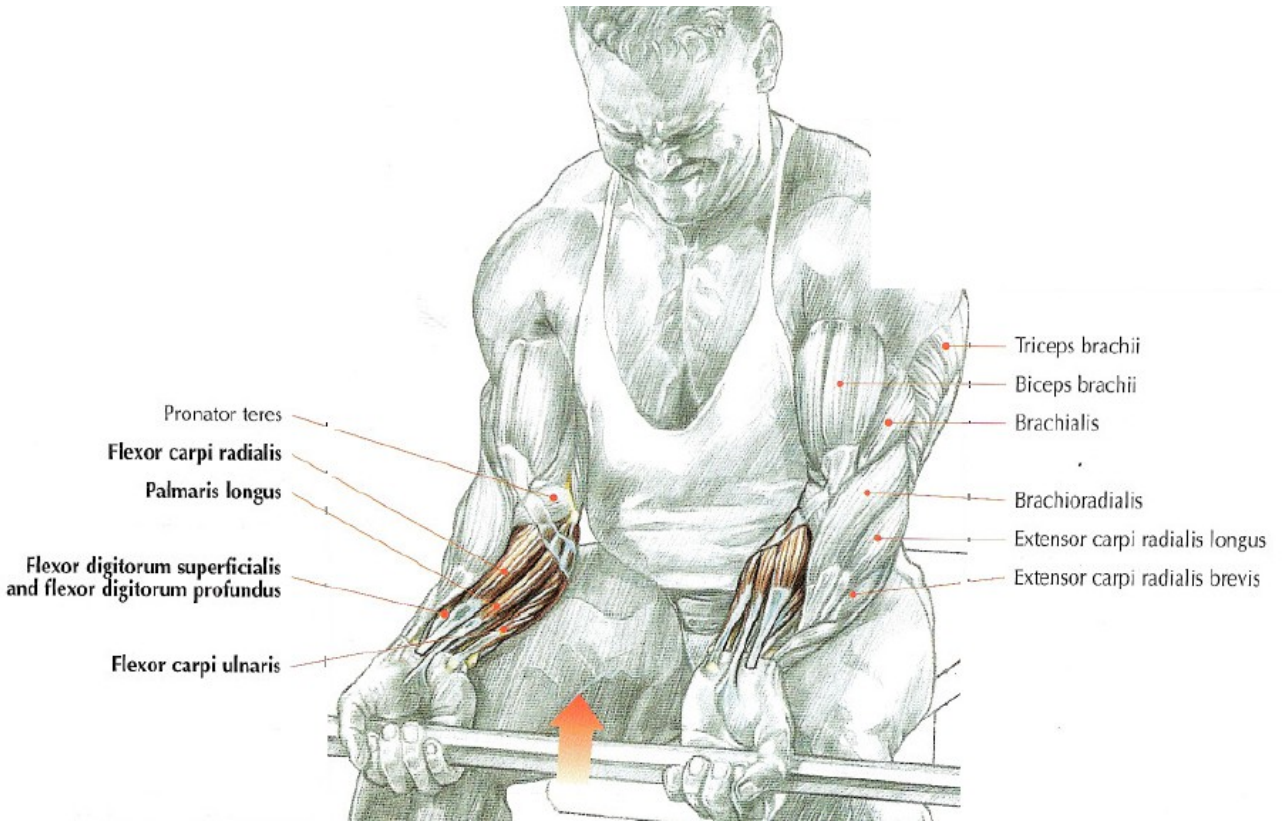
- Inhale and flex your arms by controlling the movement
- Back to the start position and exhale at the end of the movement



This exercise allow to work your triceps and works equally the tree heads.

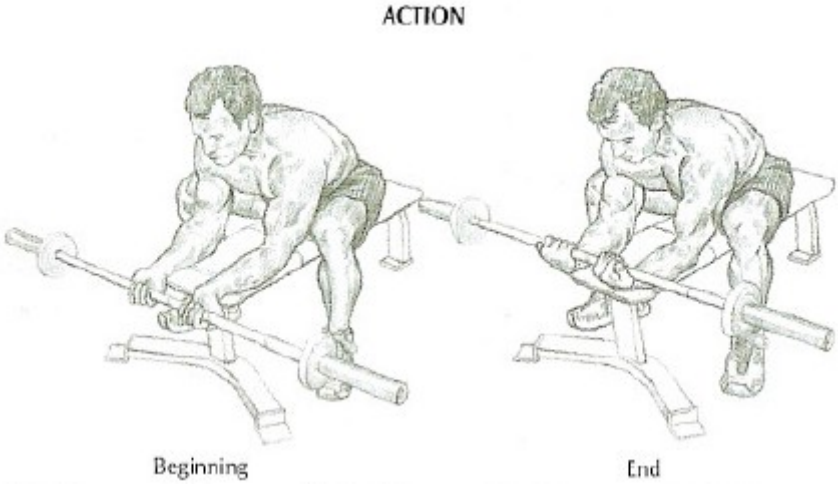


Barbell Wrists Curls

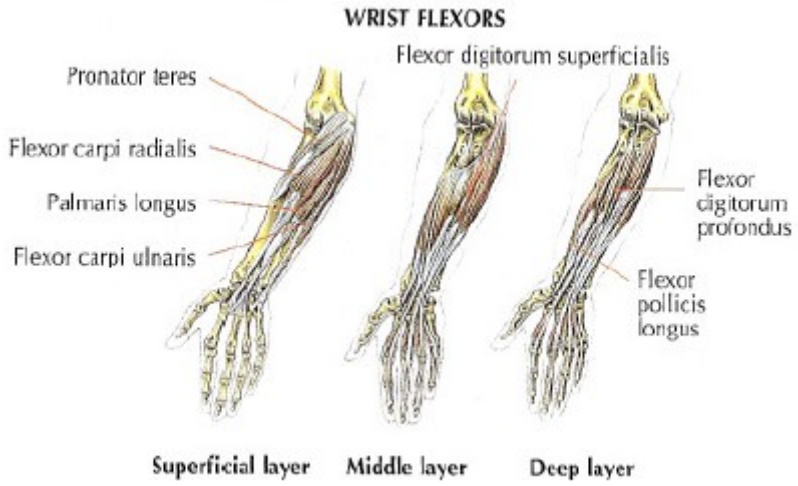


Sitting with your forearms on your thighs or on a bench. Hold the barbell with a supinated grip :

- Inhale and flex your wrists
- Exhale at the end of the movement

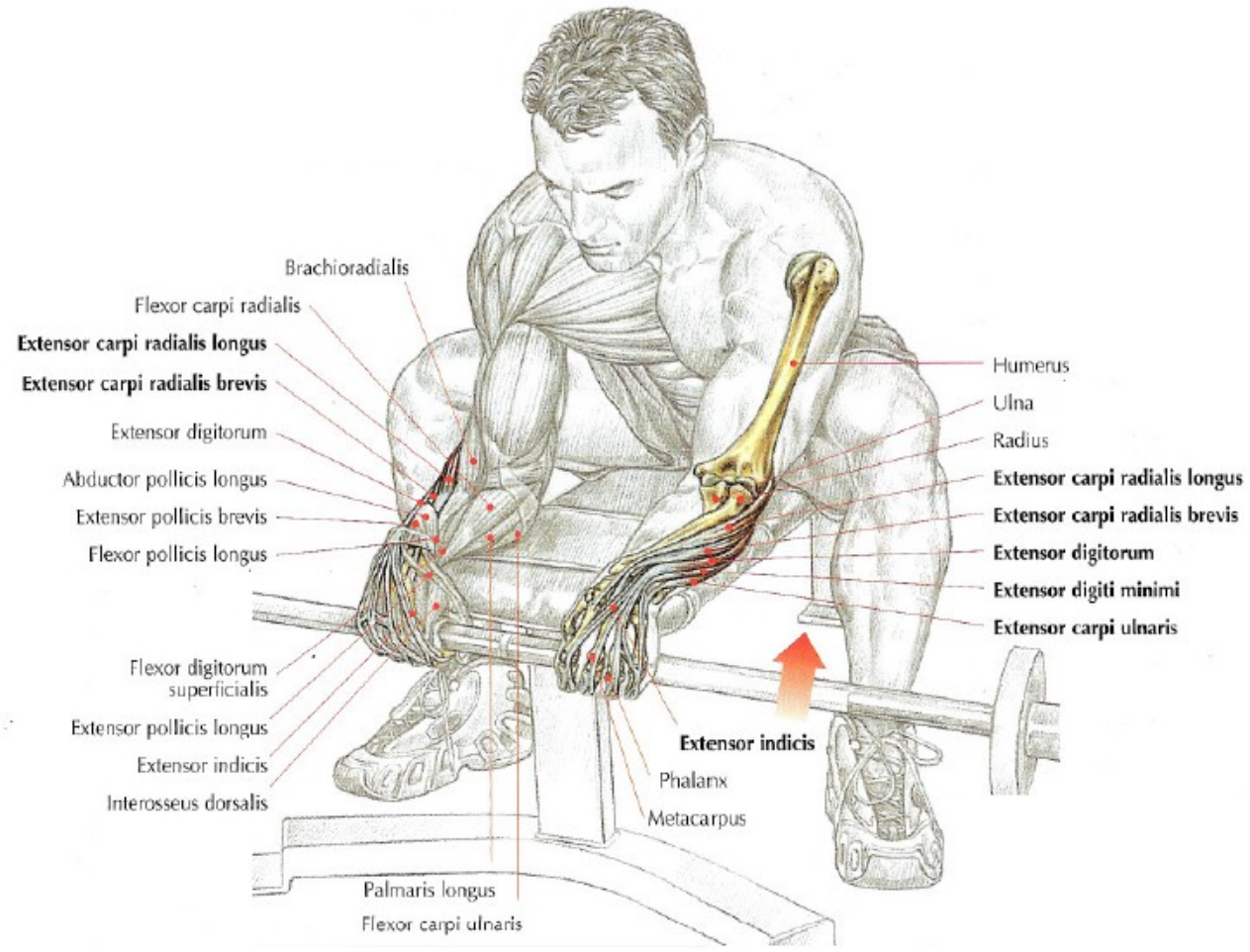


This exercice work your flexor carpi radialis muscle, palmaris longus muscle, flexor carpi ulnaris muscle, flexor digitorum profundus muscle and flexor digitorum superficialis muscle.



The two last muscles constitute the essential part of the flexors volume of the wrists.

Barbell Reverse Wrist Curls

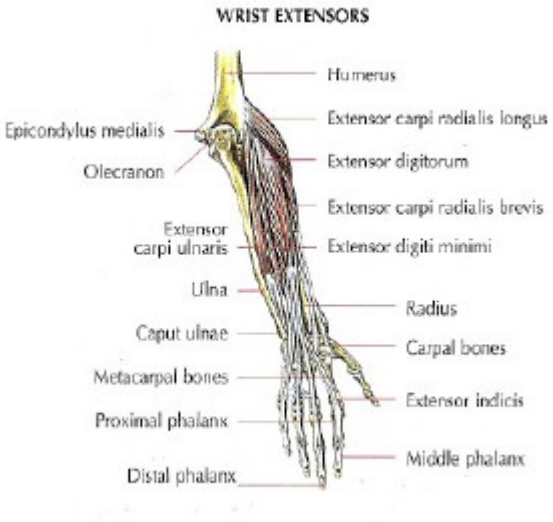


Sitting with your forearms on your thighs or on a bench. Hold the barbell with your hands in a pronated grip :

- Inhale and flex your wrists
- Exhale at the end of the movement

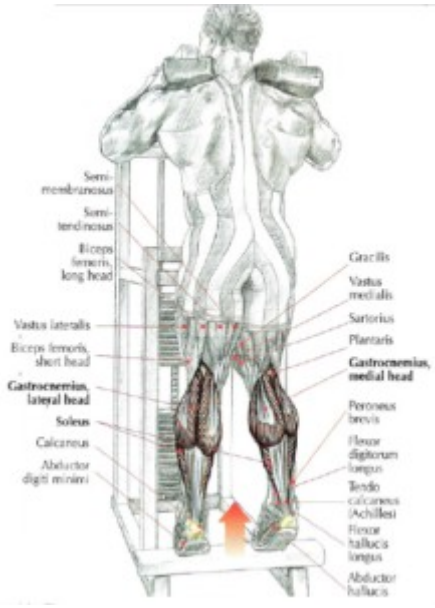
END OF MOVEMENT

This exercice train your extensor carpi radialis longus, extensor carpi radialis brevis, your extensor digitorum muscle, your extensor digiti minimi and your extensor carpi ulnaris muscle.



Note : This movement is excellent to strengthen wrist joints often weakened by the weakness of the extensor muscle.

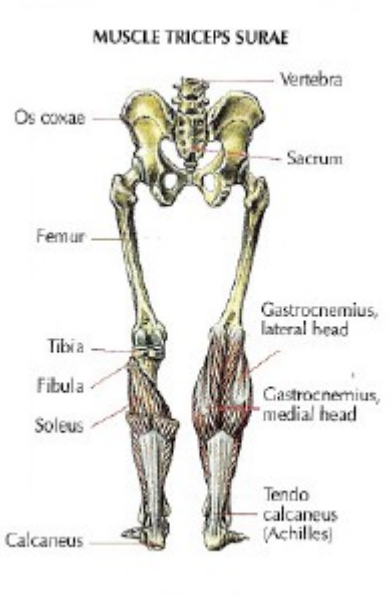
Standing Calf Raises Machine

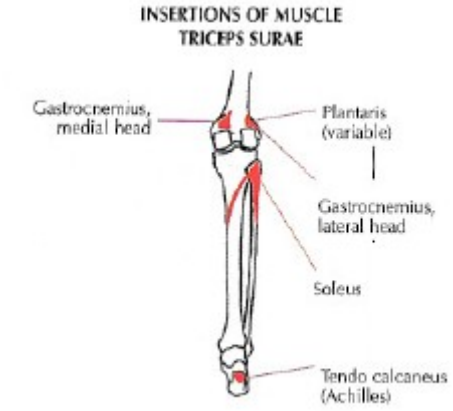


Stand with your back straight and your shoulders under the pads. The front of your feet on the step with your ankles in passive flexion :

- Do an extension of your feet with of your knees joints in extension.

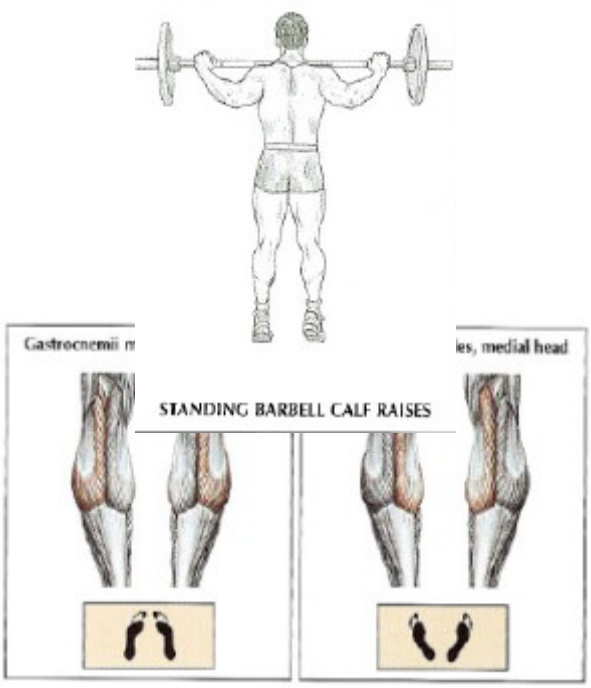
This exercise works the triceps surae composed of 2 gastrocnemius and soleus. It's really important to do each repetition with a full flexion to really stretch the muscles.





In theory, it's possible to locate the work on gastrocnemius medial (toes outward) or gastrocnemius lateral (toes inward) but, in reality it's very difficult. However, you can easily shift the emphasis from the gastronemius to the soleus by flexing your knees to relax the gastrocnemius.

Variant



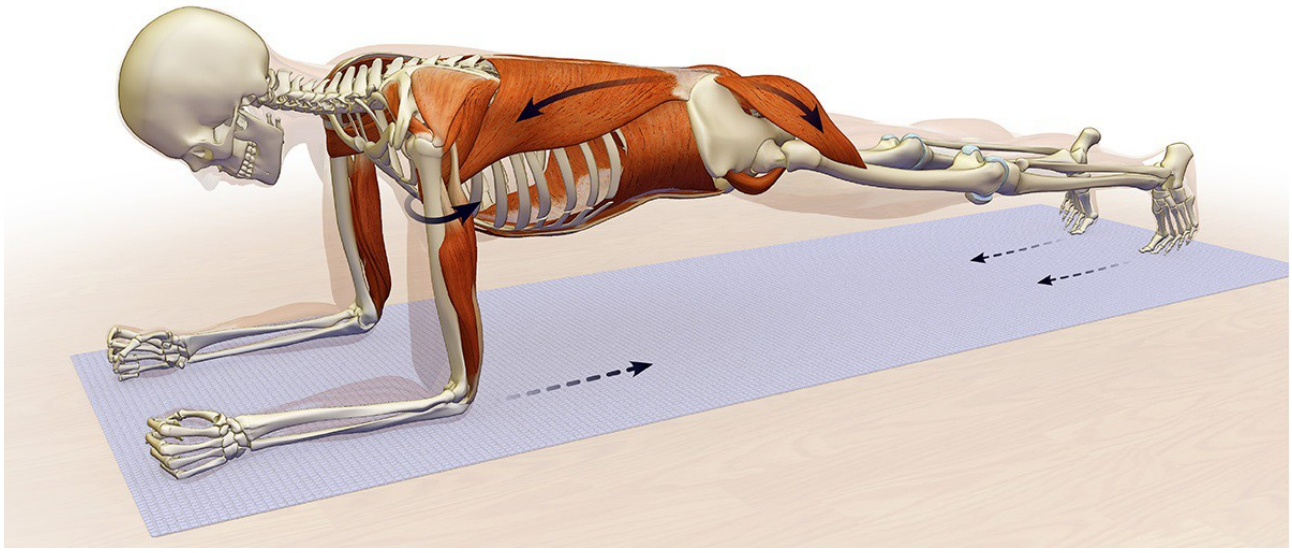
It's possible to do this movement with the Smith machine and a step under your feet.

Note

Triceps surae is a very powerful muscle that is used to lifting your bodyweight all day. It's for this reason why it's important to use heavyweights to work it.

Day 2 (Back, Biceps, Abs)

Plank

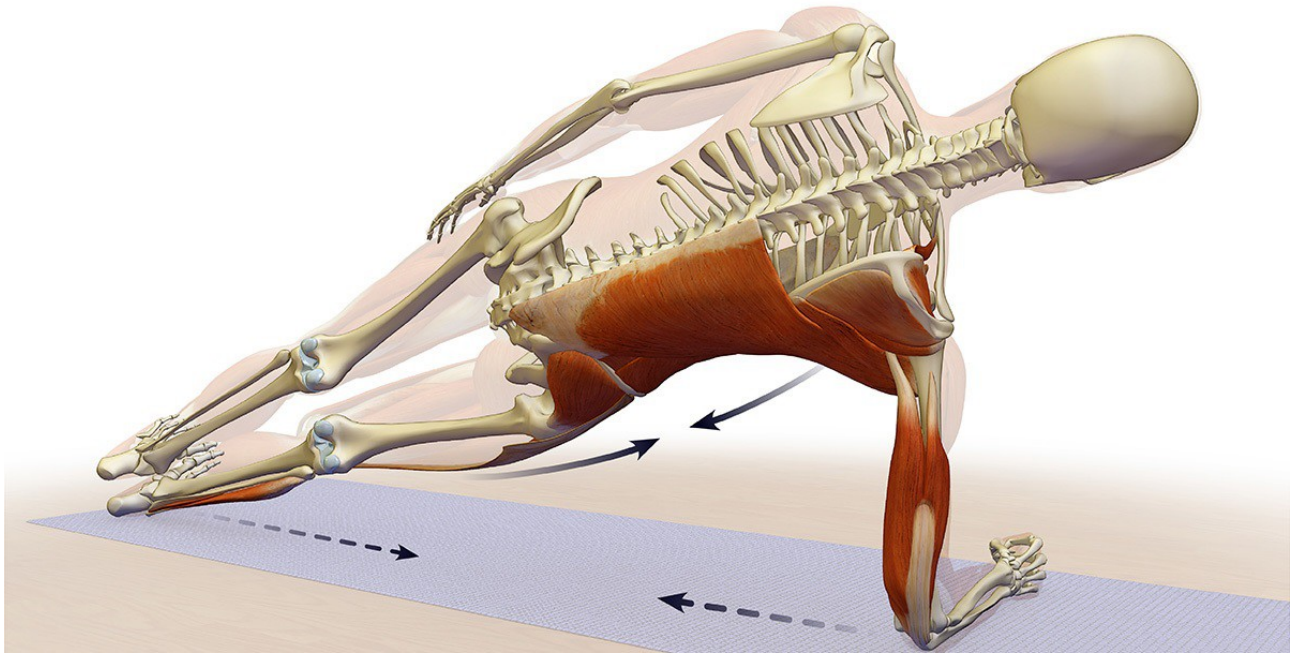


This exercise work your core and improve your waistline and your posture.

Lying facedown on the ground on your elbows with your hands shoulder length apart. Push your body upwards as if you're doing pushup. Your hands are fully extended and your toes grounded and your back straight. There should be a straigth line from your gead to your toes with no bend or arch in your back.

- Keep this position as long as possible

Keep this position at least 20 seconds and you can go to 5 minutes. Then do the 2 sides as long as possible.



Incline Bench Sit-Ups

Sitting on the bench with your feet under the pads and your hands behind your neck. Inhale and tilt your torso without ever exceeding 20° :

- Move your torso back up by slightly rounding your back to better target the effort on recuts abdominis
- Exhale at the end of the movement.

This exercise work the entire rectus abdominis muscles and iliopsoas, rectus femoris and tensor fasciae latae (these last 3 muscles help pelvis anteversion). This movement is to do with high sets.

Variant

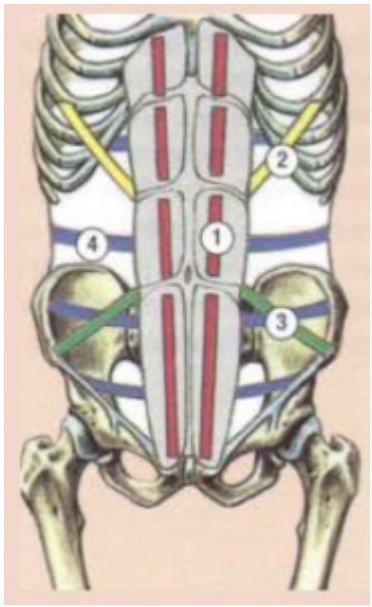
VARIATION WITH TRUNK ROTATION

When you back up, you can do a rotation of your torso to transfer a part of the effort to the obliques.

Example

A rotation to the left work more intensely right abdominal external oblique, left abdominal internal oblique and rectus abdominis on the right. Twists can be done alternately or unilaterally. The goal is to focus on the muscular sensation and it's unnecessary to incline the bench too much.

Diagram showing the senses of action of abdomen muscle and the system of viscera's compression

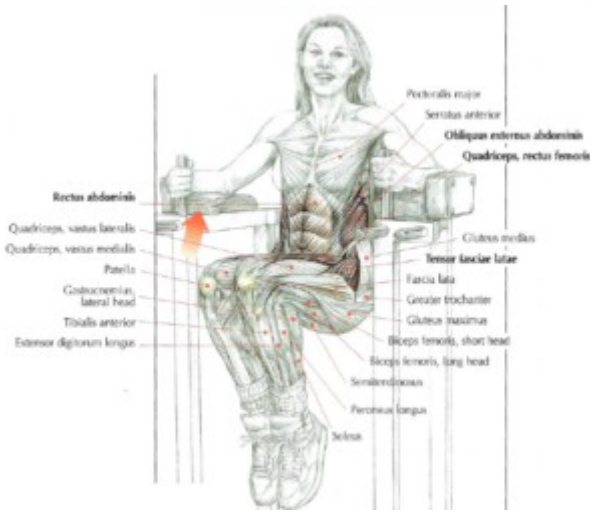


1. Rectus abdominis
2. Abdominal external oblique
3. Abdominal internal oblique
4. Transverse abdominal

With quadrupeds, the entire rectus abdominis muscles passively support the viscera (like a hammock) and help a little in locomotion.

With human being in bipedal mode, the entire rectus abdominis muscles have hugely strengthened so that the torso and pelvis is upright and prevent the pelvis from tipping excessively during walking or running. They became powerful muscles of contention and they built a strong core to maintain viscera in an active way.

Leg Raises

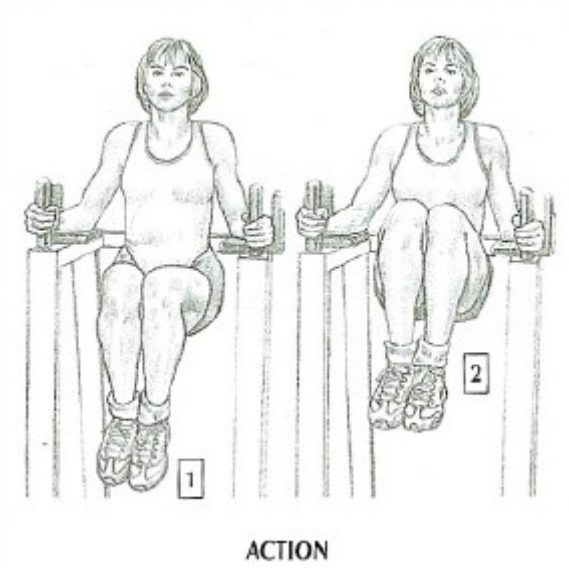


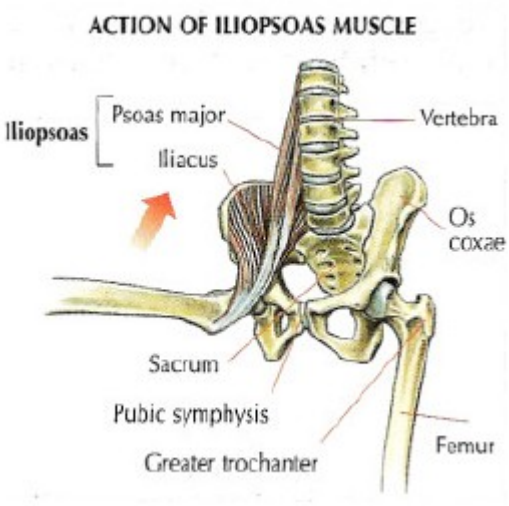
On your elbows with your back on the backrest :

- Inhale and back up your knees to your torso by rounding your back to feel your abs contraction.

- Exhale at the end of the movement.

This exercise works the hips flexors, mainly iliopsoas, obliques and rectus abdominis (it's the inferior part of the rectus abdominis which works intensely).





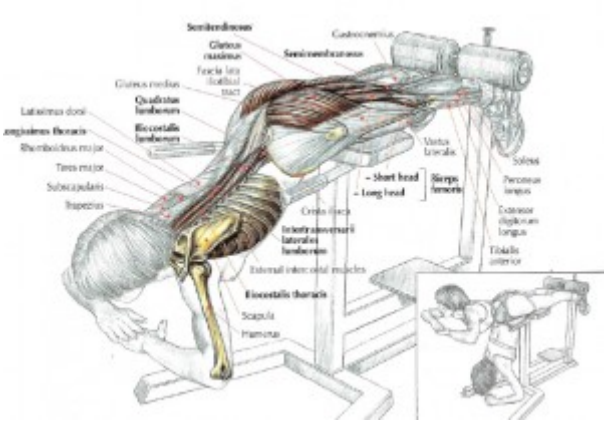
Variant

a) To target the work on abs, it's advisable to make small swings of legs with your rounded back, without ever lowering your knees below the horizontal.

b) To increase the intensity, the movement can be done with your legs stretched but it's necessary to have a good hamstrings flexibility.

c) You can keep your knees grouped to your torso for a few seconds to have an isometric contraction.

Machine Back Extension



Installed in the bench with your ankles blocked. The axis of the bending is done with the coxofemoral joint and the pubis is outside of the bench :

- Your torso bent and you make an extension to the horizontal by raising your head

- Then, you make a hyper extension (you accentuate the lumbar arch). Be careful, this hyper extension is to be done with caution to avoid injuries.

This exercise mainly works with all the spinal erectors muscles of the spine (iliocostalis lumborum, iliocostalis thoracis, longissimus thoracis, intertranversarii laterales lumborum), quadratus lumborum and a little bit the glutes and hamstrings (except the short head of the femoral biceps).

A complete flexion of the torso makes it possible to stretch the whole sacro-lumbar. By immobilizing the pelvis, what means that the axis of flexion is at the front of the body, effort is targeted on the sacro-lumbar muscles but less intensely because of the decrease in amplitude of the movement and increasing the power of the lever.

For even better muscle work, you can maintain alignement for a few seconds at the end of extension.

For beginners, there is a incline bench recommended for ease of movement execution.

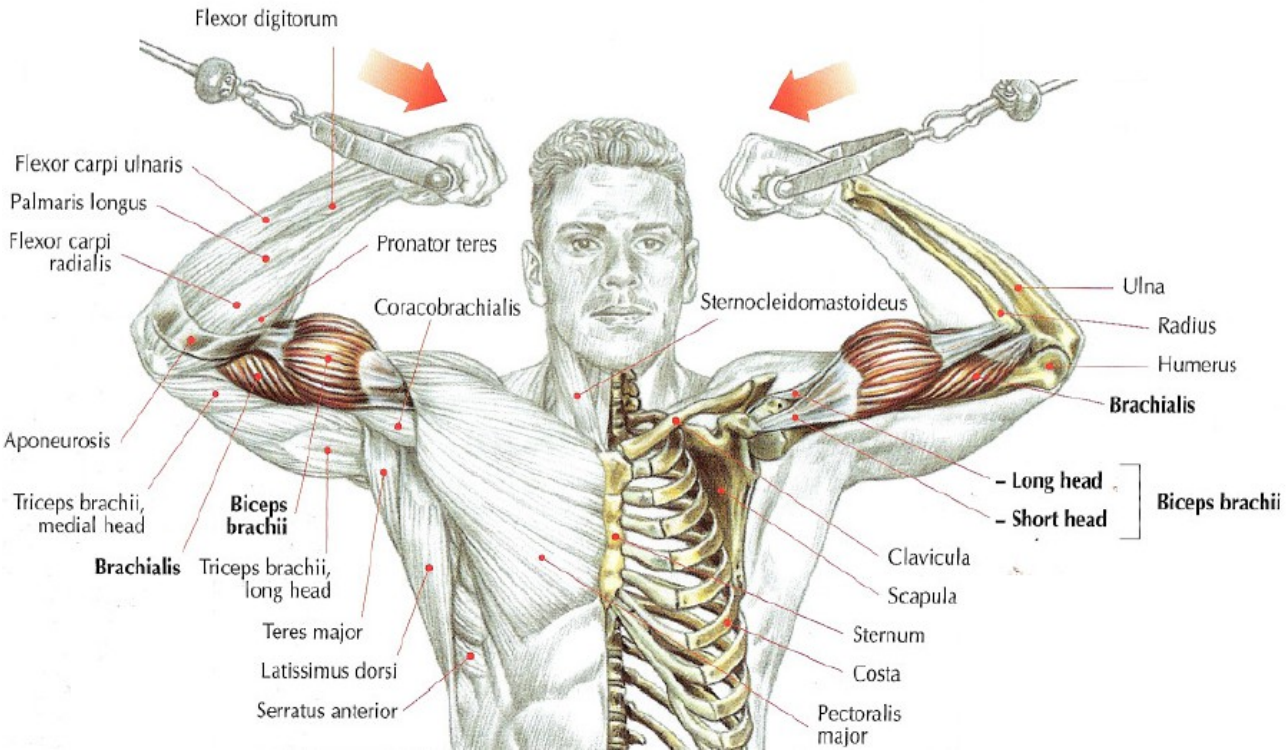
Variants

- By making back extension with a stick on your shoulders, you immobilize the part of the top, which makes it possible to target the effort on the lower part of the spine's muscles.

- There is a machine that specifically targets work on the sacro-lumbar of the spinal muscle (the machine I use).

- To increase the intensity of the exercise, you can make the movement with a weight plate held behind your neck or tight against your torso.

High Pulley Curls

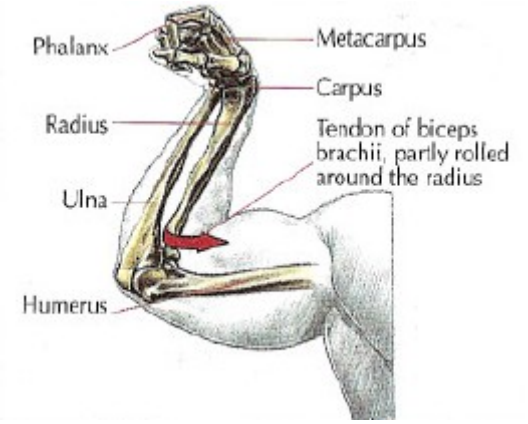


Standing between the pulleys, arms outstretched and take the handles with a supinated grip :

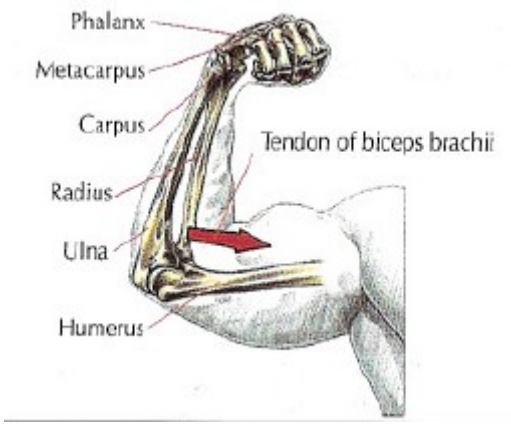
- Inhale and flex your arms
- Exhale at the end of the movement

This exercice is good as a movement for the muscle's definition during a biceps session. This exercice train biceps, mostly long head because it stretched and tensed with your arms in cross. The brachialis, monoarticular flexors of elbow work too.

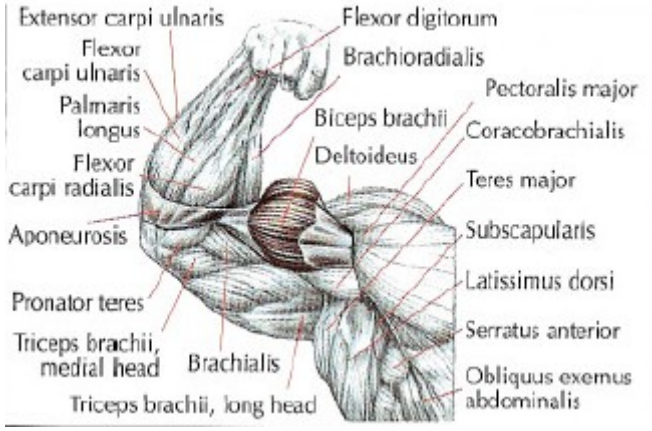
Don't do this exercice heavy, the key is to be focus to feel the contraction from the internal part of the biceps. Sets with high reps give better results.



When the hand is in pronation, the distal tendon of the biceps is in part wrapped around of the radius.

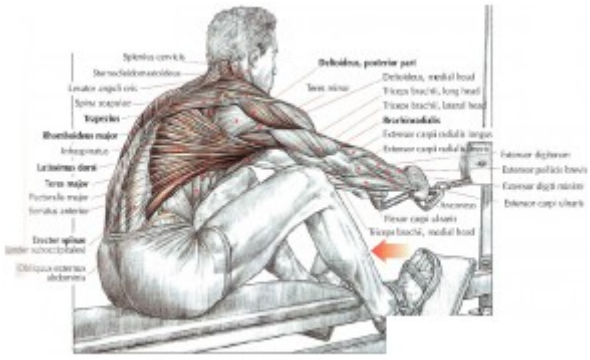


When the biceps is contracted, the force exerted on its distal tendon rotates the radius on its axis and keep the hand in supination.



Note : Apart from its role of flexor arm, the brachialis is also the most powerful supinator muscle.

Seated Row



Sitting on the machine with your feet on the foot stop and with your torso bent:

- Inhale and straightening your back and pulling your elbows back, you bring back the handle to your sternum's base

- Exhale at the end of the movement and returns to the starting position by controlling the movement.

This exercise works latissimus dorsi, teres major, posterior deltoid and a little bit biceps, brachialis, brachioradialis. The trapezius and rhomboid work during the approach of your shoulder blades at the end of the movement.

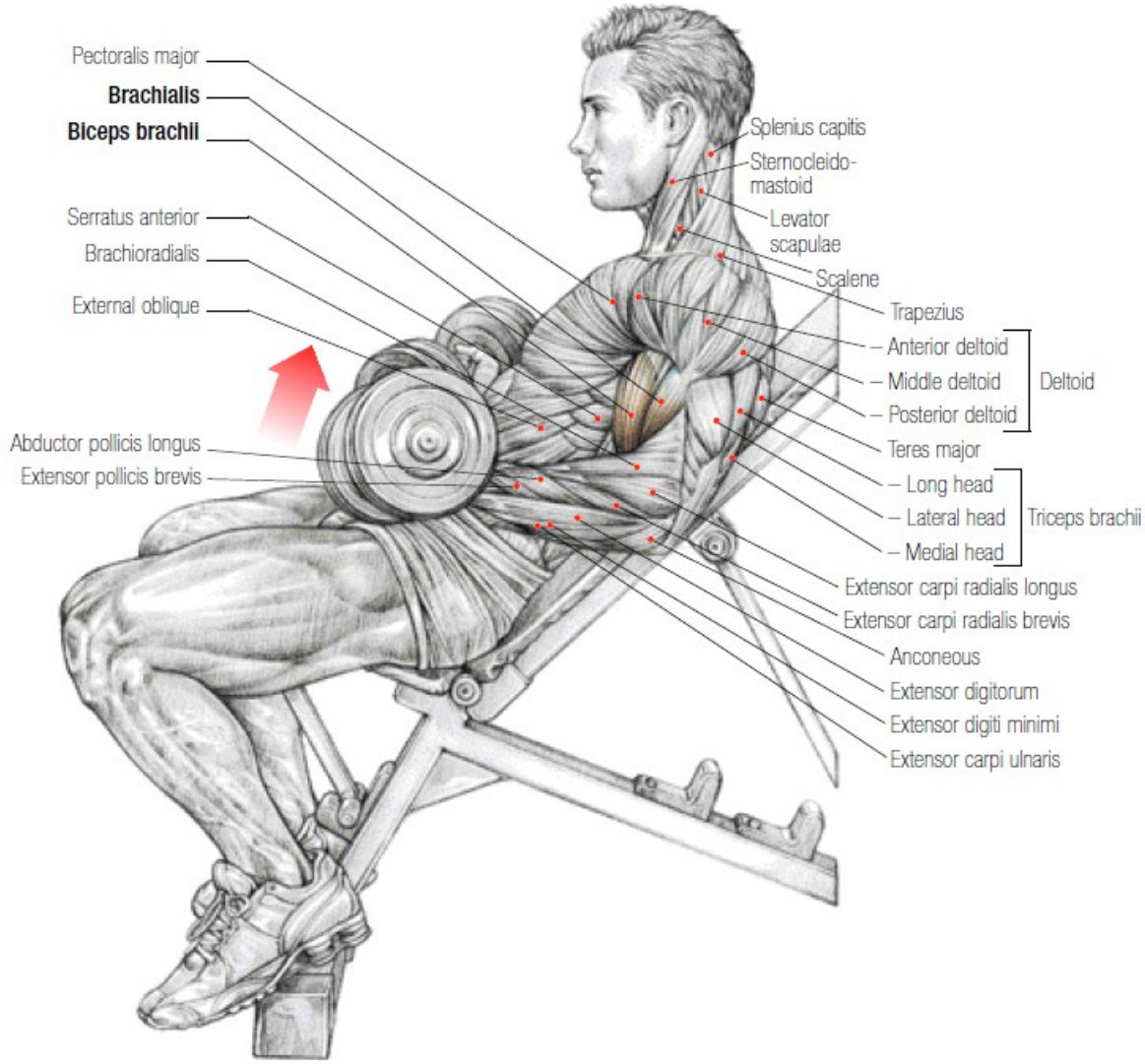
Upon straightening your torso, the spinal erectors also work.

What is interesting with this exercise is that by allowing yourself to be pulled by the weight in the negative phase of the movement, you relax your back's muscles.

Attention

Don't round your back to avoid injury.

Incline Dumbbell Curls



- Sitting with a dumbbell in each hand in a semi-pronation grip.
- Inhale and flex your forearm by rotating the wrist to the outside before that the dumbbell is horizontal.
- Complete flexion by raising elbows and exhale at the end of movement.

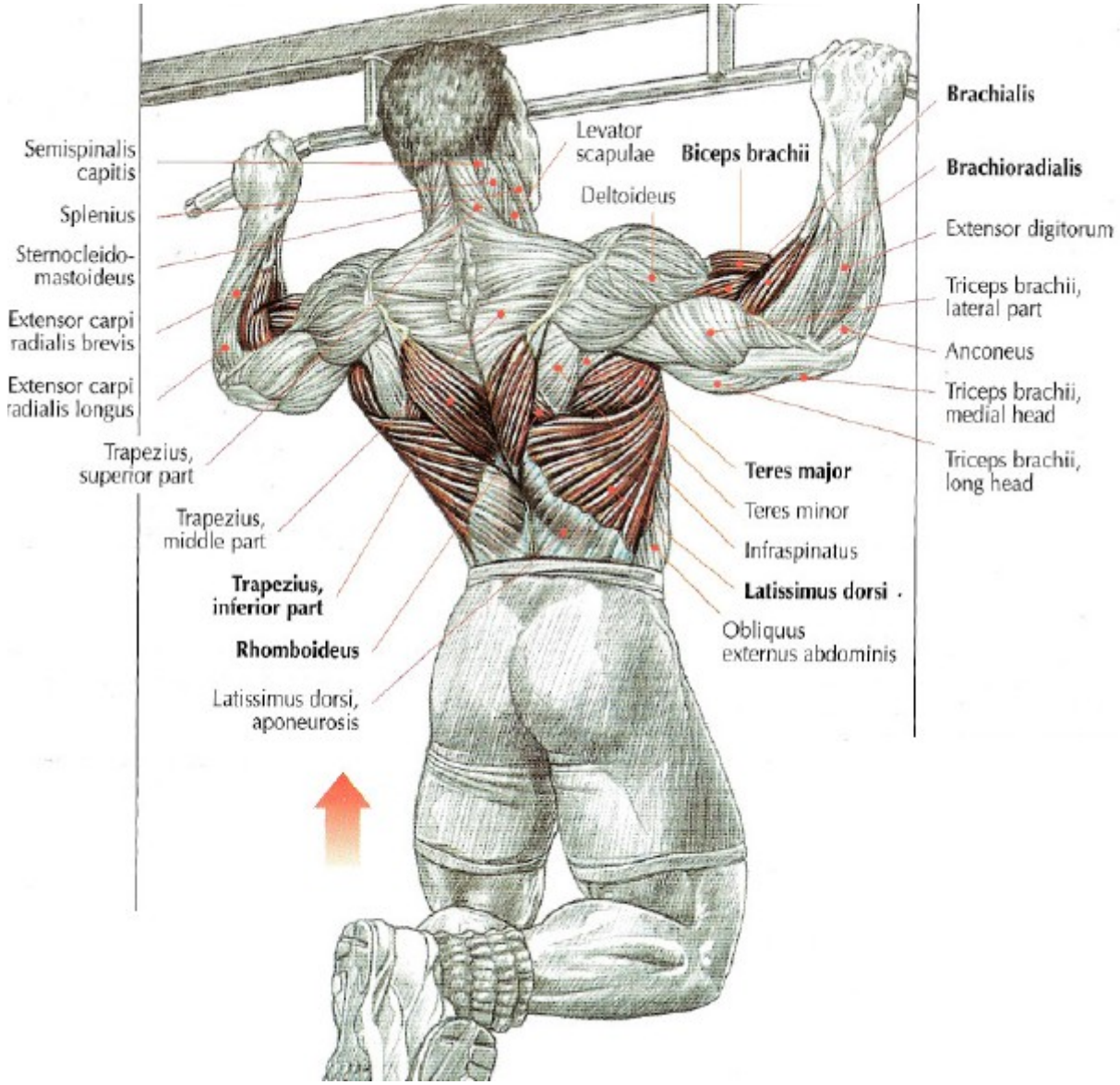
This movement is especially use to target the biceps long head (external muscle part) favorably stretch to start flexing forearms. This movement works also brachialis and brachioradialis.

An alternative : You can do this movement by performing alternative flex. It’s possible to intensify biceps work by starting the movement in supinated grip.

Be careful

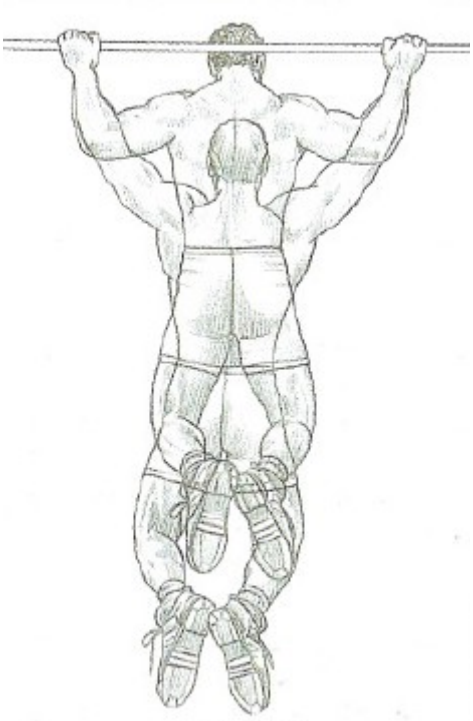
Adjust bench’s angle based on individual differences in shoulder flexibility. If the arm is too worn backwards, the long head’s tendon of biceps excessively rub in the bicipital groove of humerus, which can cause premature wear and tendon inflammation.

Chin-Up



In suspension at the fixed bar with your hands apart with a pronated grip:

- Inhale and pulls to bring your chest almost to the level of the bar
- Exhale at the end of the movement
- Return to the starting position by controlling the movement



VARIATION
CHIN-UPS BEHIND THE NECK

This exercise works latissimus dorsi, teres major and when approaching the shoulder blades at the end of the movement, it's the rhomboids and trapezius (middle and inferior part). This exercise works a little bit biceps brachii, brachialis, brachioradialis.

This exercise works the back in thickness.

Variants

By pulling out your chest, you can pull to the chin.

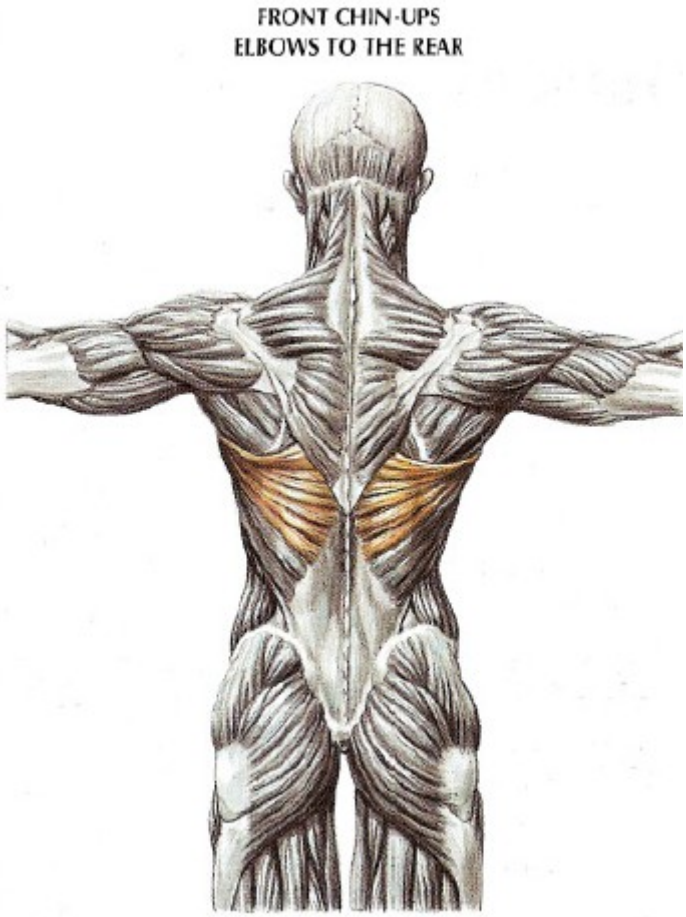
If lifting your bodyweight is too easy, you can attach weights to a belt.

From a biomechanical point of view, do this exercise with your elbows along your body work the outer fibers of the latissimus dorsi and develop your back in width.

By pulling out your chest with your elbows back to pull to your chin, work the upper and middle fibers of the latissimus dorsi and those of the teres major.

CHIN-UPS BEHIND THE NECK
ARMS OUT TO THE SIDES

Primary emphasis on the lower lats

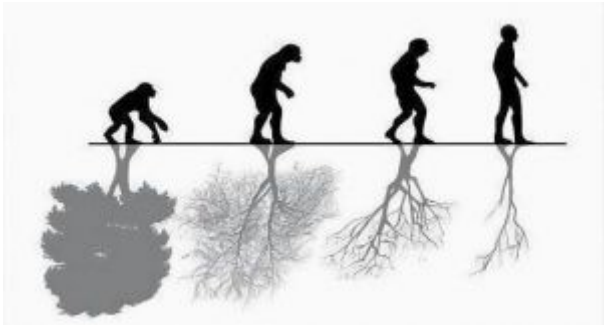


Primary emphasis on the upper lats

Note

Pectoralis major works a little bit to be in synergy with the latissimus dorsi and teres major to close the angle between your arm and your core.

EVOLUTION



Latissimus dorsi and teres major have an important role in the four-legged movement of our distant ancestors. They have the function of pushing the front legs backward.

During arboreal life, these muscles were transformed into muscles specialized in vertical displacement.

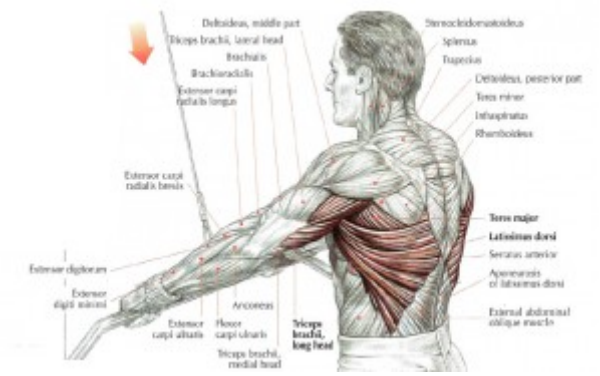
During life on the ground, our ancestors bought the biped but retained the possibility of climbing.

That’s why we have powerful back’s muscles to tow our bodies and climb trees.

Note

The difference that human beings have with our close relatives, the monkeys, is the development of lower limbs specializing in bipedalism. Our torso and upper limbs have the same structure and proportions. The truth is that monkeys don’t have long arms, it’s us who have long legs.

Straight-Arm Lat Pulldowns



Standing in front of the machine with your feet slightly apart. You take the bar with a pronated grip and your hands' position are wider than your shoulders width:

- Having your back straight and squeeze your abs. Inhale and bring the bar down to your thighs with your arms stretched (or your elbows slightly bent).

- Exhale at the end of the movement.

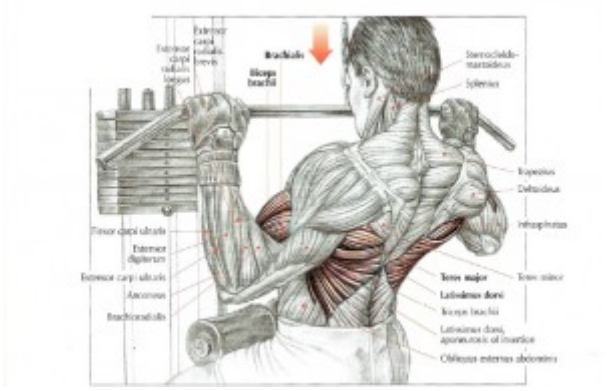
This exercise works the latissimus dorsi, teres major, and triceps long head.

This exercise helps you to have a stable arm-torso junction.

Note

This exercise is great for swimmers to have a better power stroke. Many international coaches have integrated this exercise into their swimming programs.

Lat Pulldowns



Sitting in front of the machine with your legs rigged. Take the bar with a pronated grip and your hands very apart:

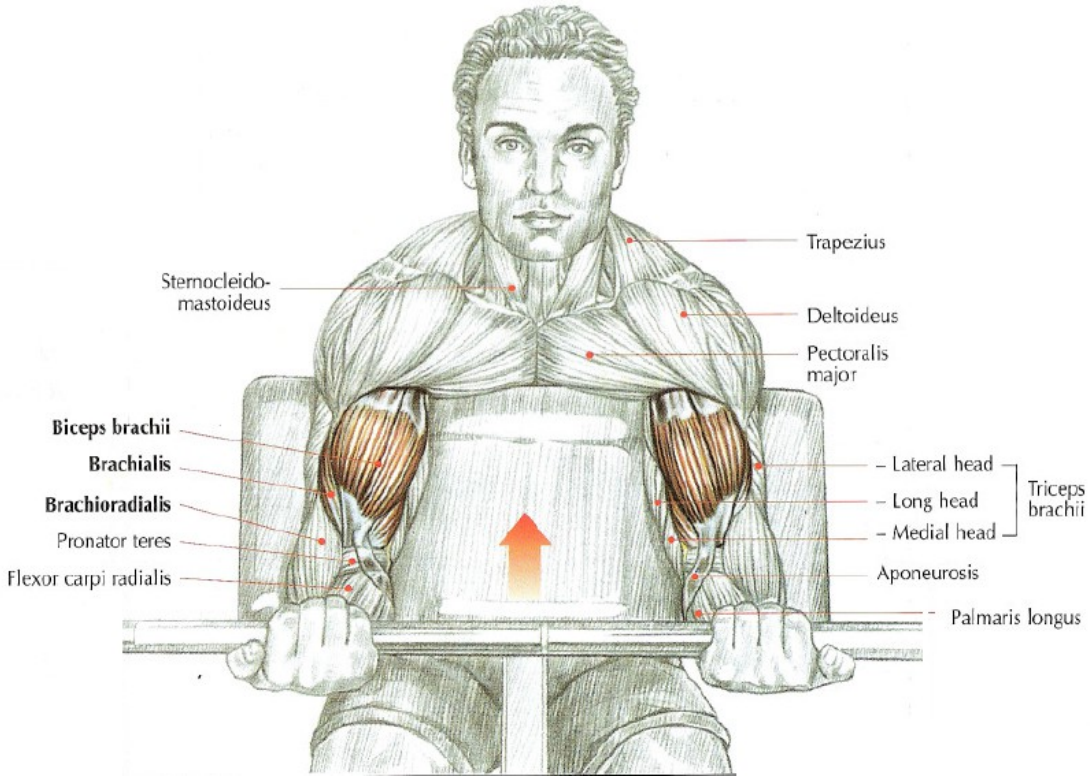
- Inhale and pull the bar down to your upper chest by pulling out your chest and bringing your elbows back.

- Exhale at the end of the movement

This exercise works the superior and central fibers of the latissimus dorsi, teres major and a little bit the trapezius (middle and inferior portions), rhomboids, biceps, brachialis, and pectoralis major.

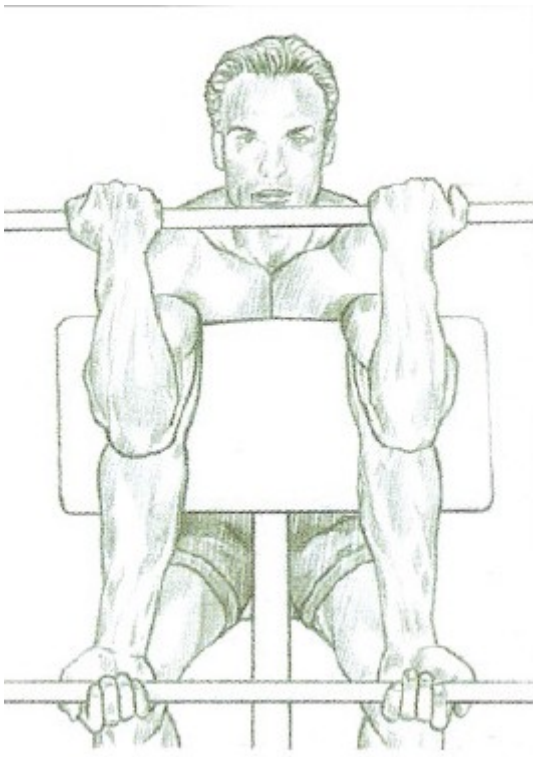
This exercise is excellent for developing back in thickness.

Preacher Curls



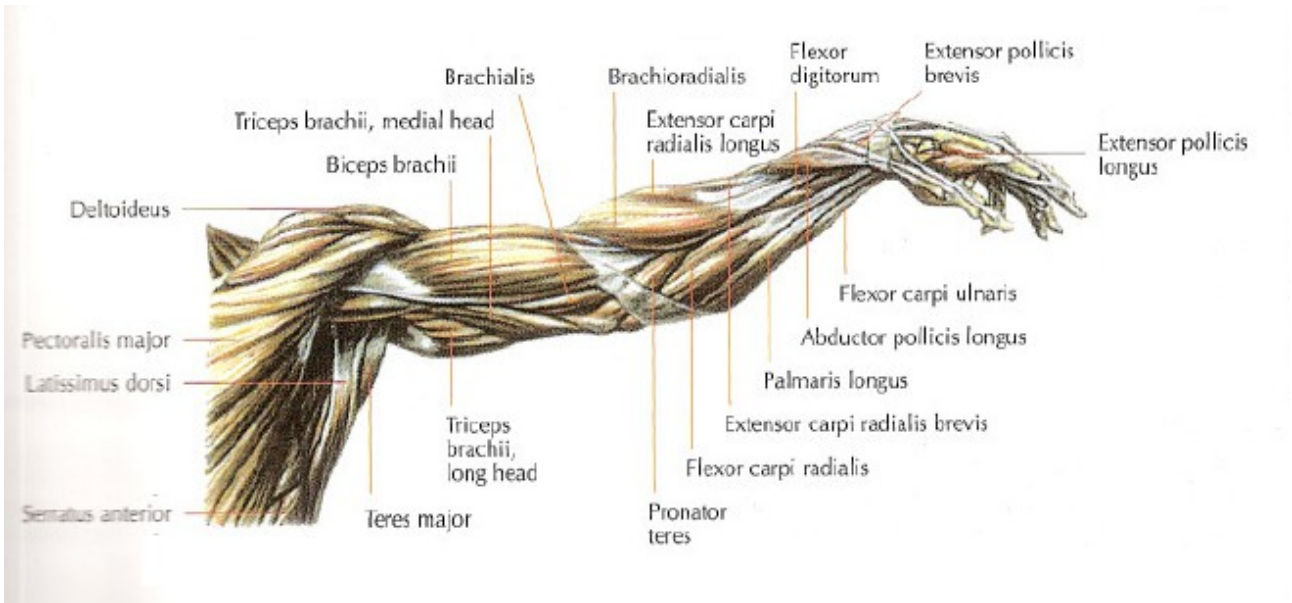
Sitting with your arms on the bench :

- Inhale and flex your arms
- Exhale at the end of the movement



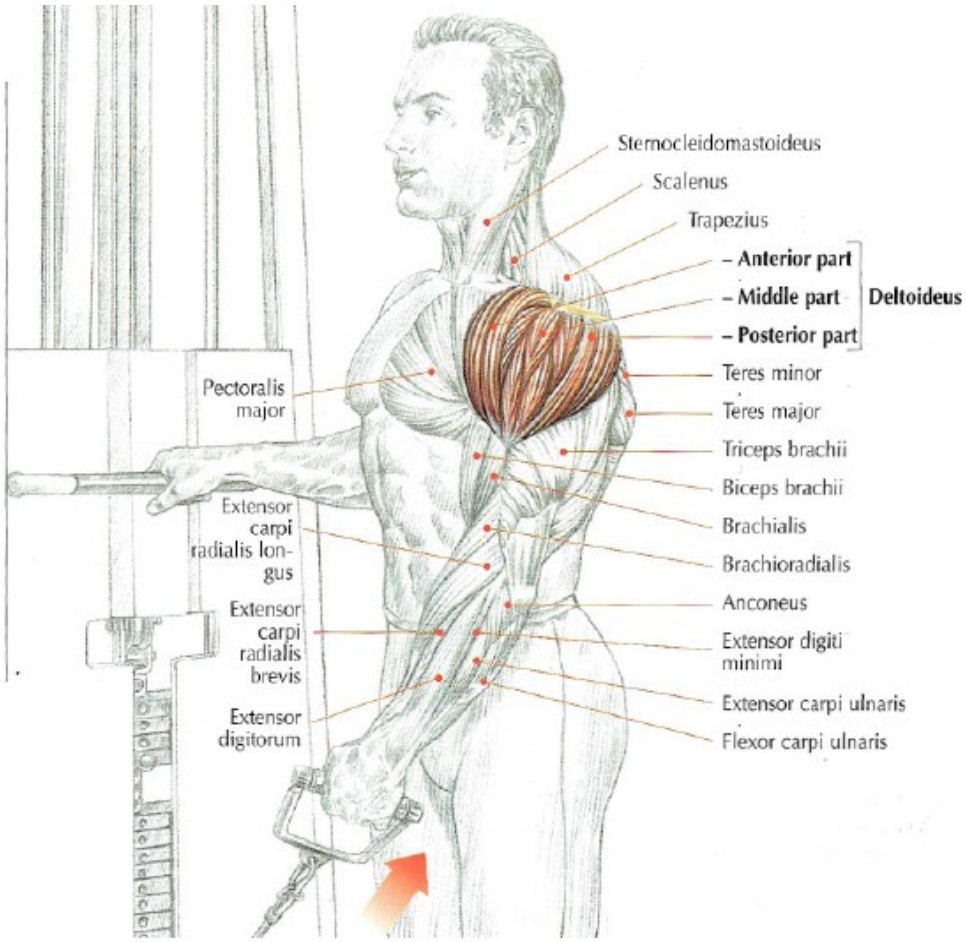
ACTION

This exercice is good to target the biceps, brachialis and brachioradialis.



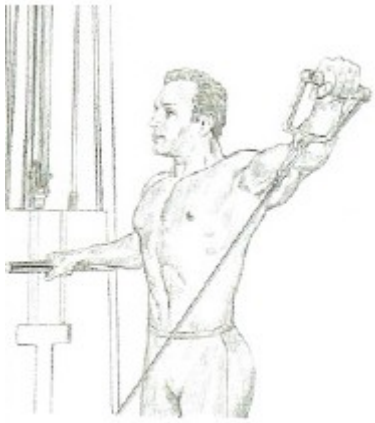
DAY 3 (SHOULDER, FOREARMS, CALVES)

Low Pulley Lateral Raises



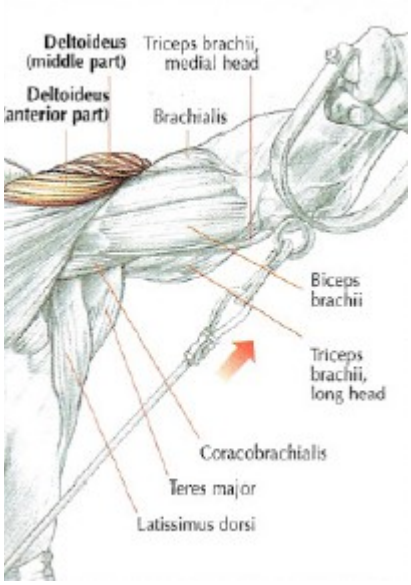
Standing with the handle in your hand. Your arm along your body :

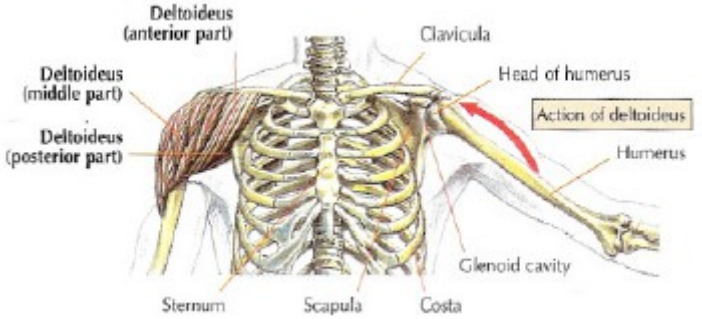
- Inhale and raise your arm to the horizontal
- Exhale at the end of the movement



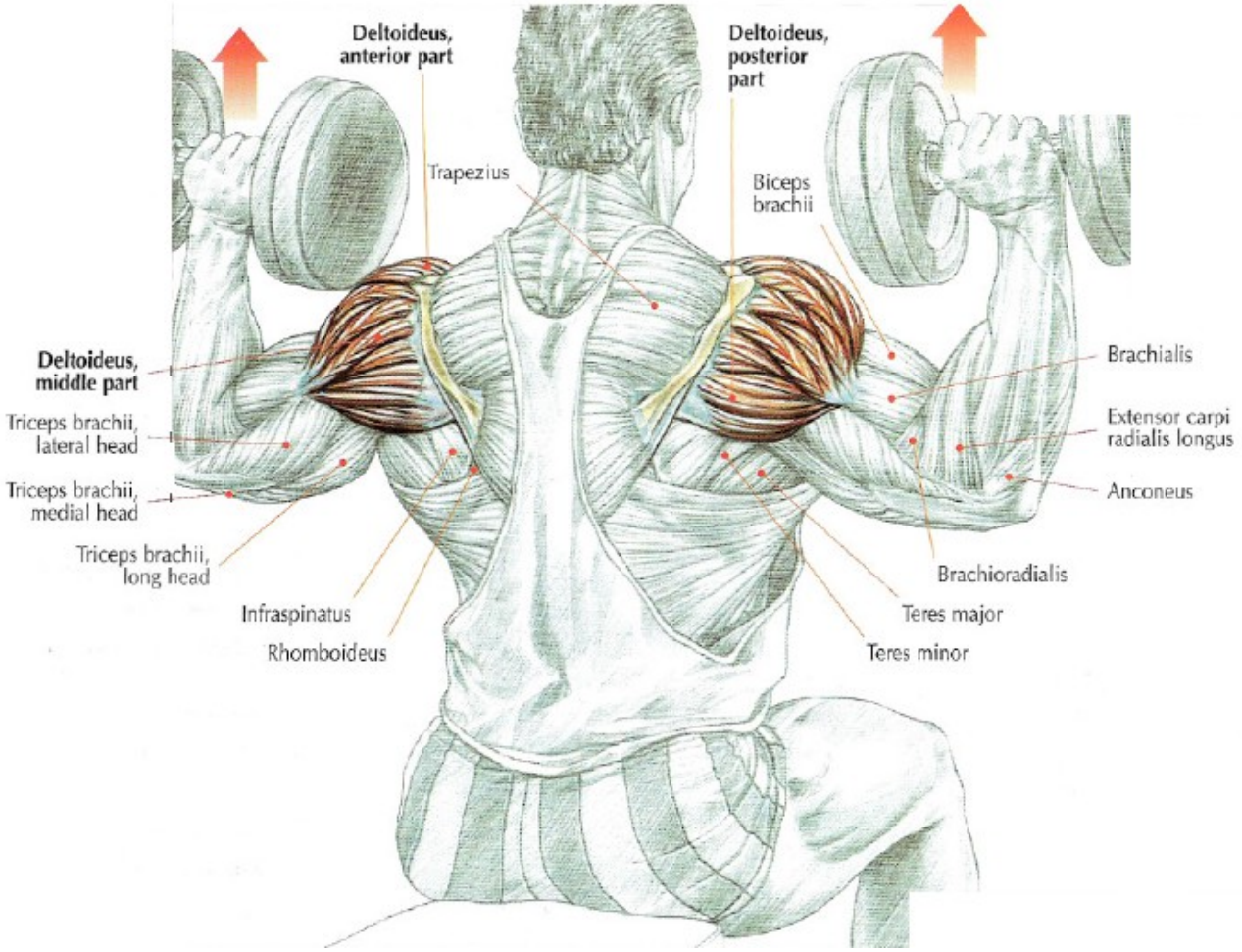
END OF MOVEMENT

This exercice mainly works deltoid lateral (middle) beams. Deltoid is composed of several beams : anterior, lateral and posterior. This is why it’s important to vary the working angles to work all beams.





Dumbbell Press



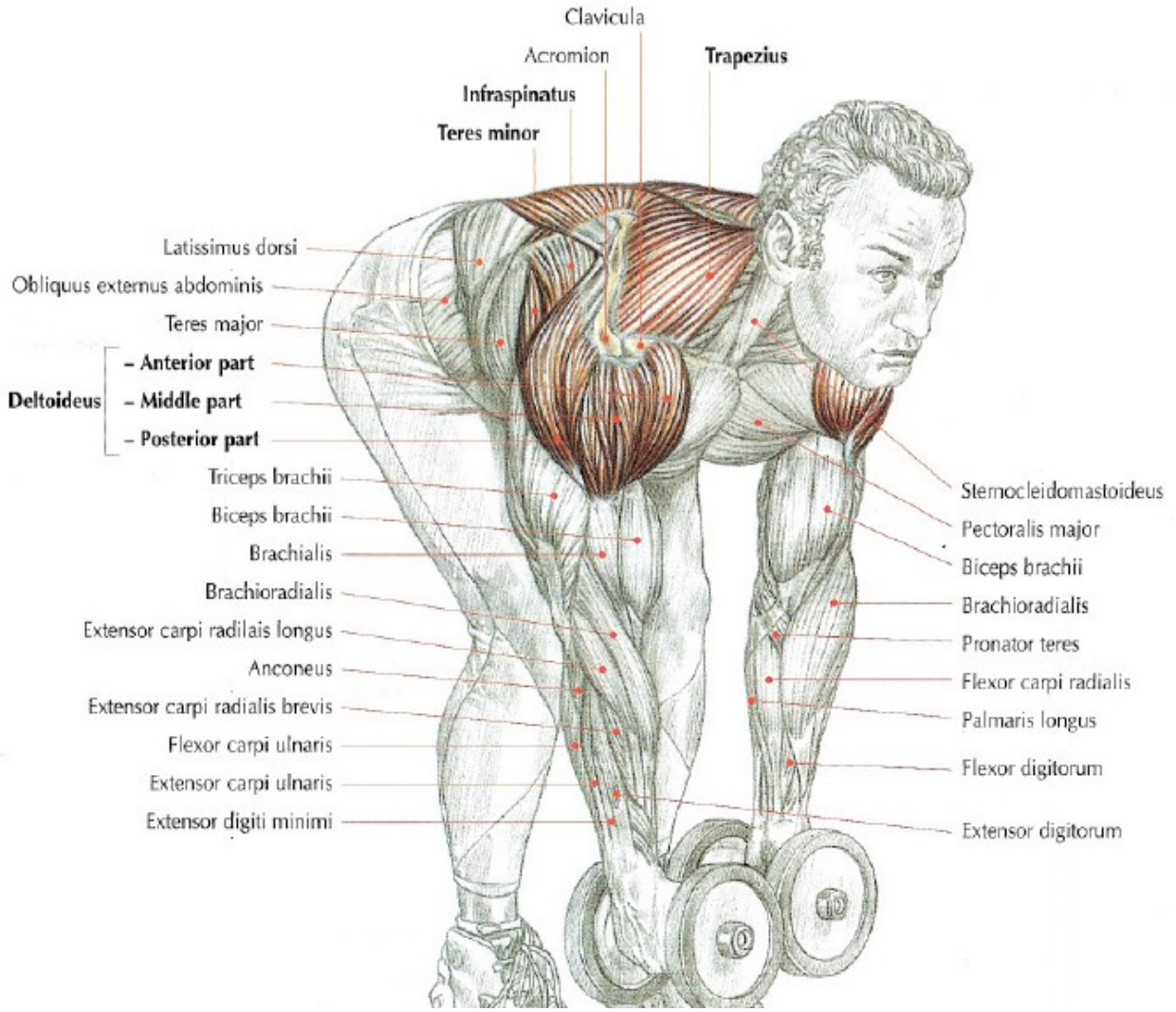
Sitting on a bench with your back straight. Take dumbells in pronation (thumbs inwards) at shoulders height :

- Inhale and press to have dumbells over your head
- Exhale at the end of the movement

This exercice works deltoids (mainly medial deltoids), trapezius, serratus anterior muscle and triceps.

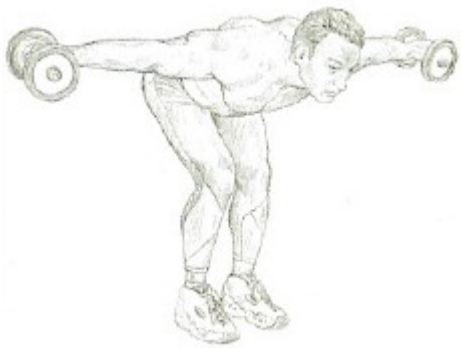
This movement can be done standing or alternating arms. The seated version helps to prevent excessive arching of the back.

Bent-Over Lateral Raise



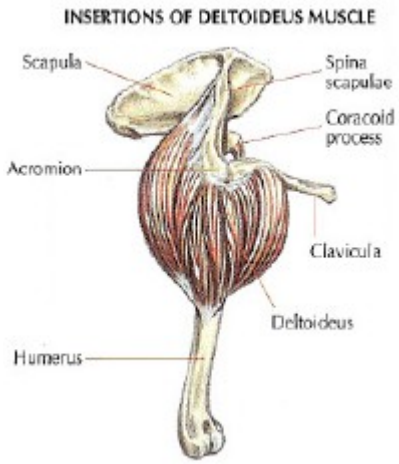
Standing with your legs apart and flexed. Your torso bent forward with your back straight. A dumbbell in each hand with elbows slightly bent :

- Inhale and raise until to the horizontal
- Exhale when you return to the start position



END OF MOVEMENT

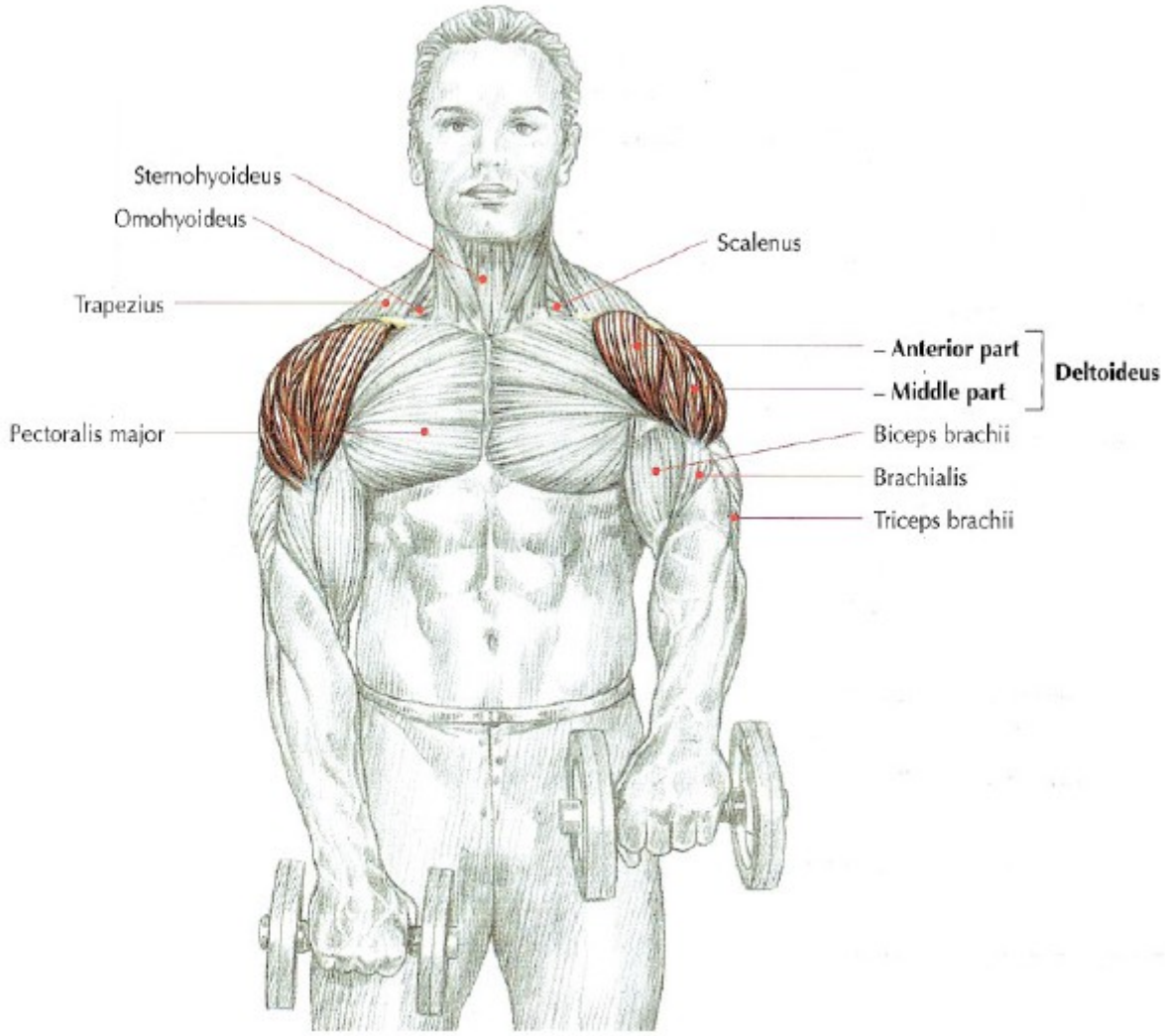
This exercise work the whole of shoulders accentuating the work of the deltoid's posterior beams of the. If you tighten your shoulder blades at the end of movement, you use trapezius (middle and inferior fibers), rhomboid, teres major and infraspinatus.



Variant

It’s possible to do this exercise lying face down on an incline bench.

Front Raises



Standing with your legs slightly apart. Take a dumbbell in each hand in pronation. You can keep dumbbells on your thighs or on the side :

- Inhale and make an alternate raise of your arms forward (or antepulsion) until your eyes level.
- Exhale at the end of movement

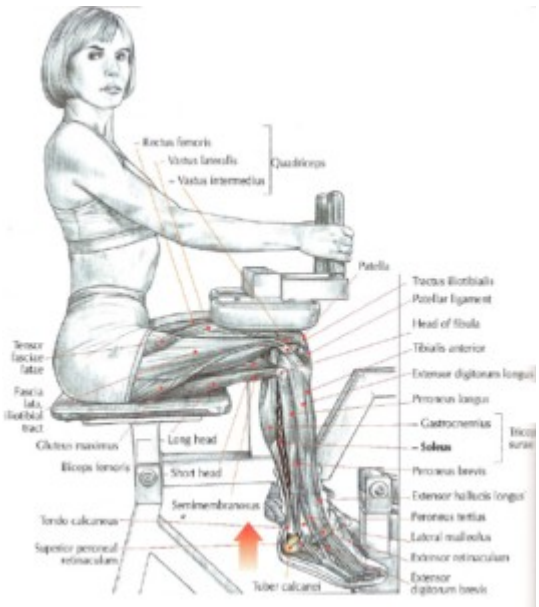
ACTION

VARIATION
Two-arm front raises.

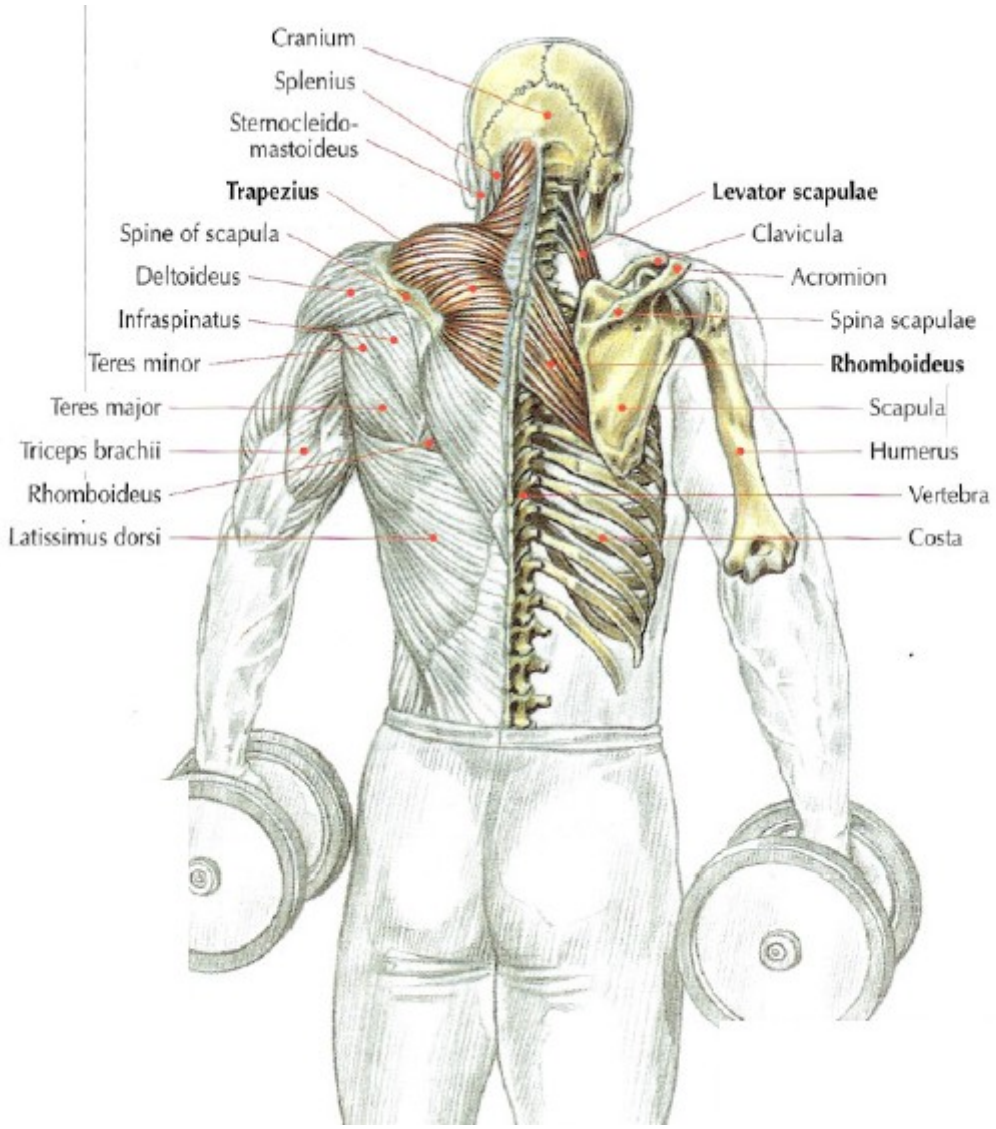
VARIATION
Lying face down on an incline bench.

This exercise work mainly deltoid's anterior beams, clavicular beam of the pectoralis major and a little less the rest of deltoid. In all arm raise movements, scapula fixators (shoulder blades) on rib cage such as anterior serratus and rhomboids, are also used allowing humerus to tilt on a stable support.

Seated Calf Raises



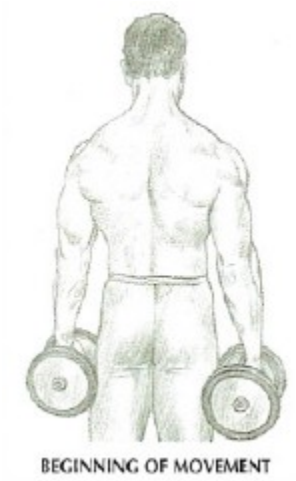
Dumbbell Shrugs



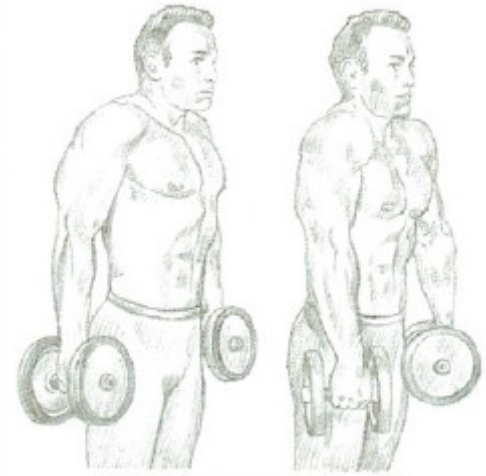
Stand with your legs slightly apart. Your head is straight or a little bent forward. Your arms relaxed along your body with a dumbbell in each hand :

- Shrugs your shoulders as high and as far back as possible

- Lower the dumbbells to the starting point

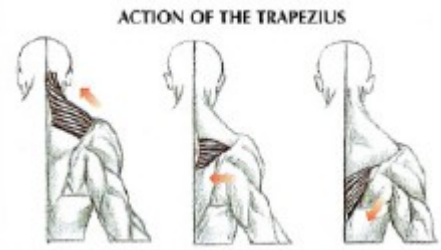


BEGINNING OF MOVEMENT



ROTATION AT THE END OF MOVEMENT

This exercise works the upper trapezius, levator scapulae and rhomboids when you press your scapulae together to shrug your shoulder to the rear.

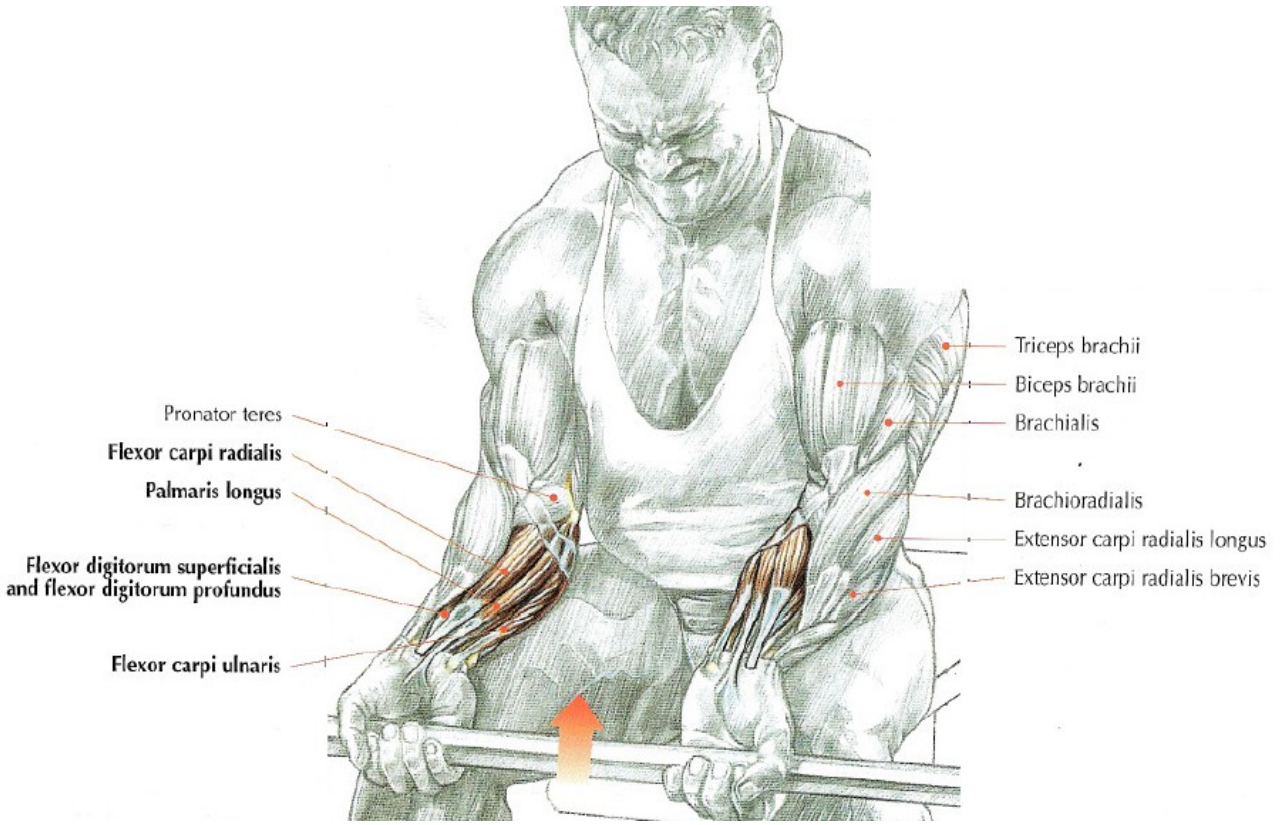


ACTION OF THE TRAPEZIUS

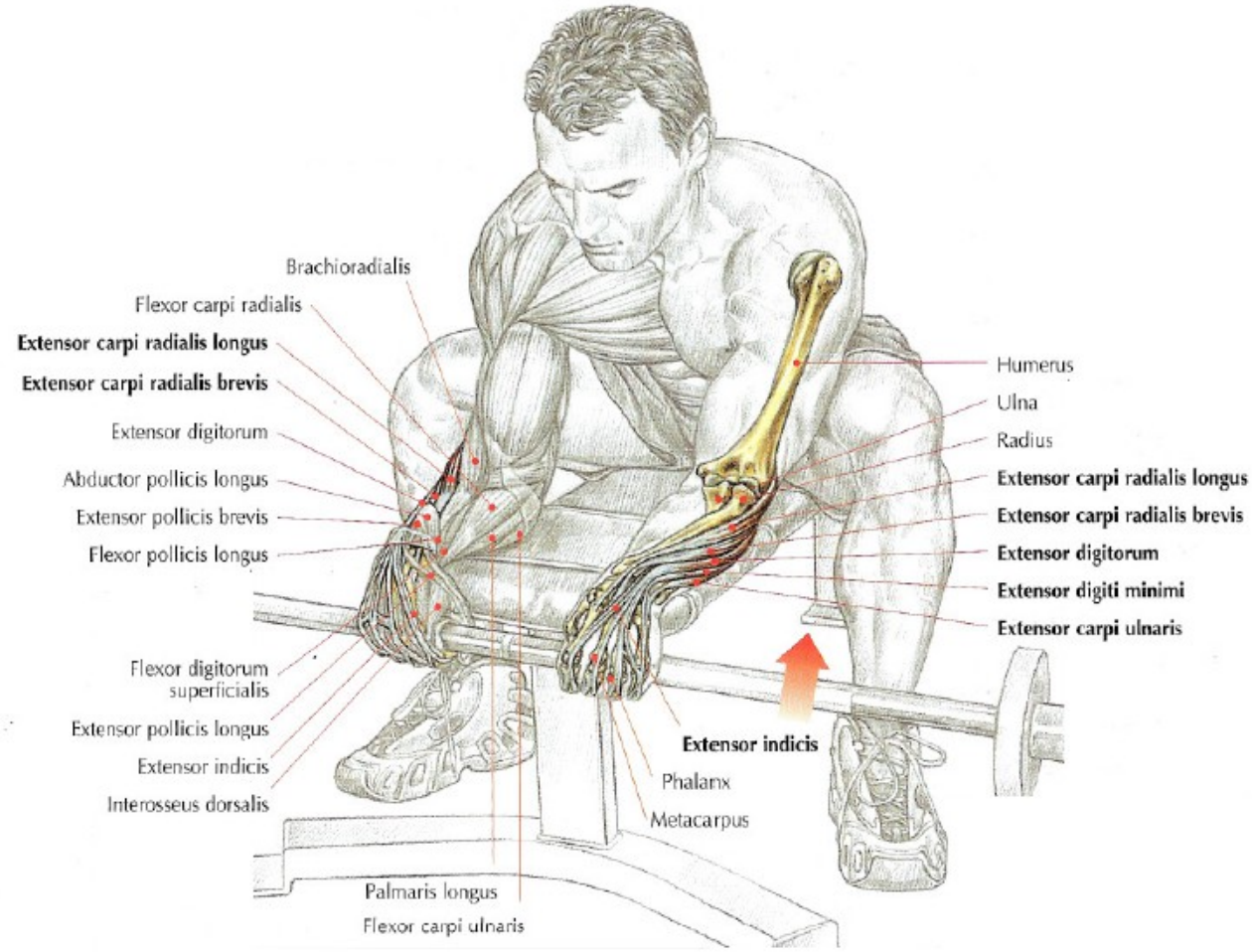
Note

With heavy weights, the shoulder’s rotation becomes impossible.

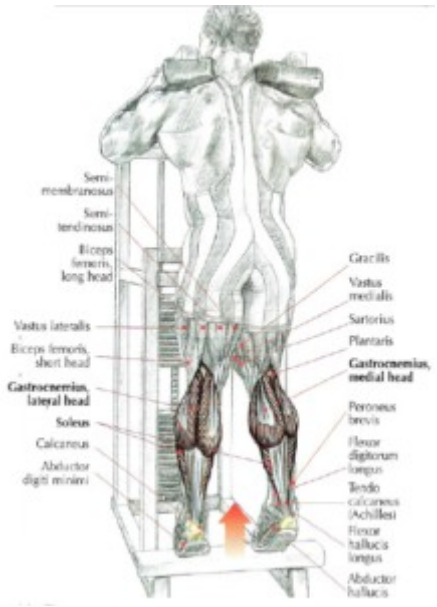
Barbell Wrists Curls



Barbell Reverse Wrist Curls

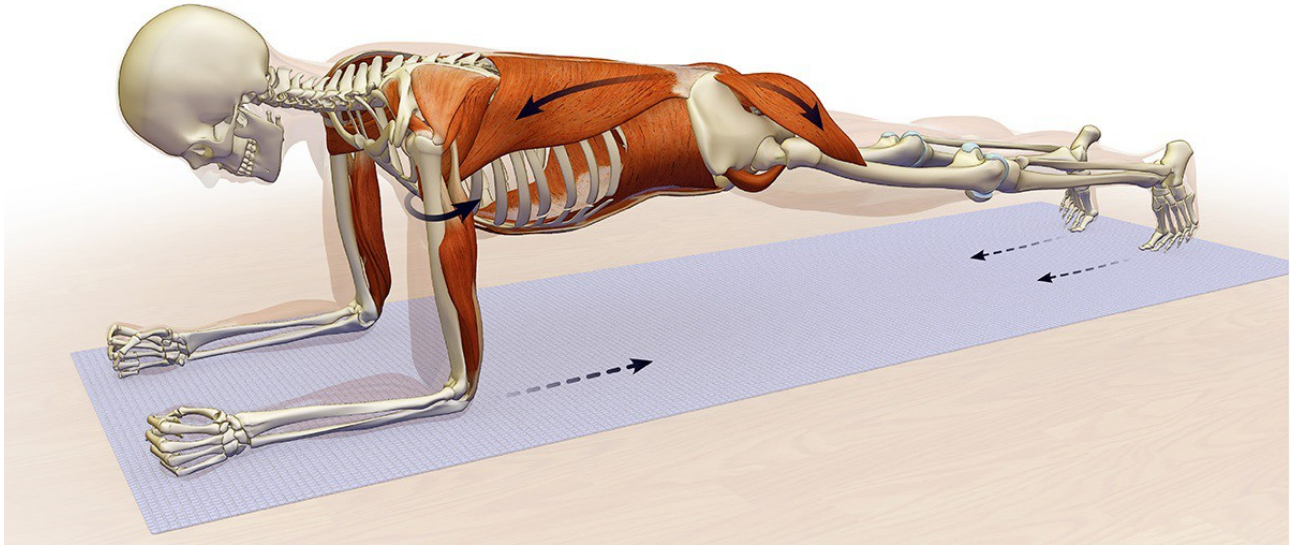


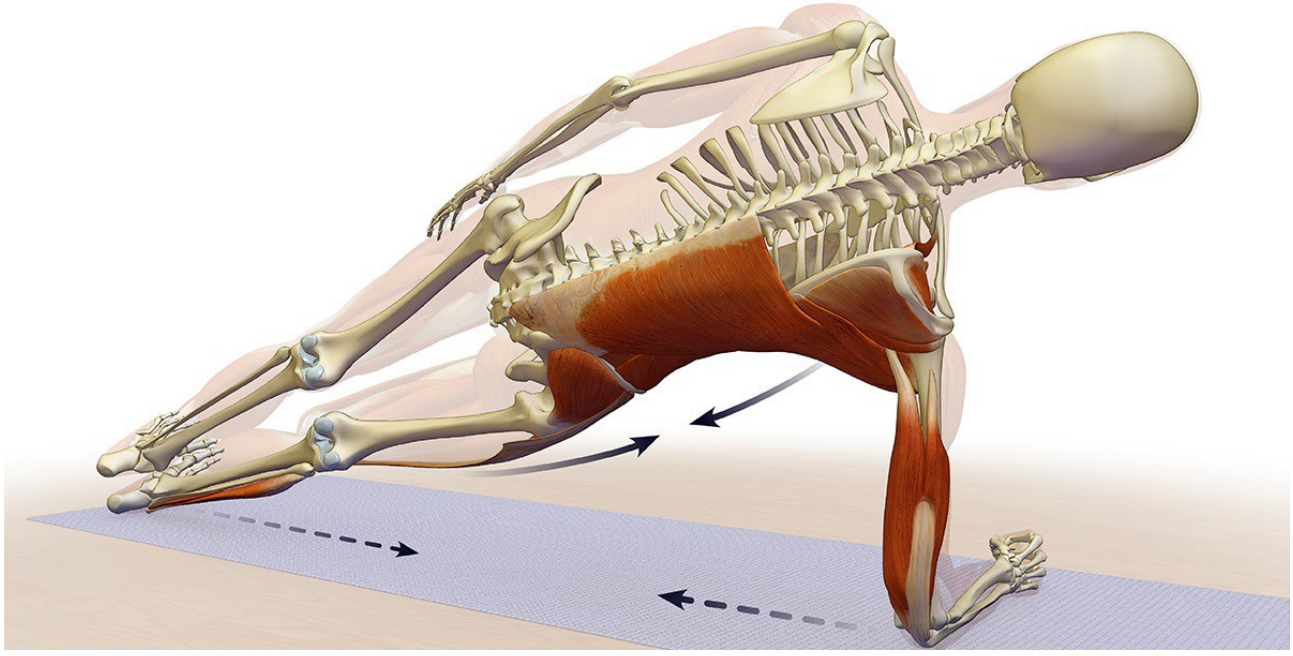
Standing Calf Raises Machine



Day 4 (Abs, Legs)

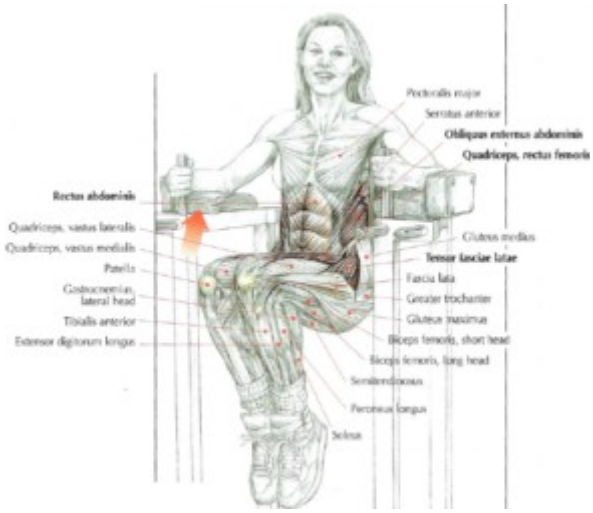
Plank



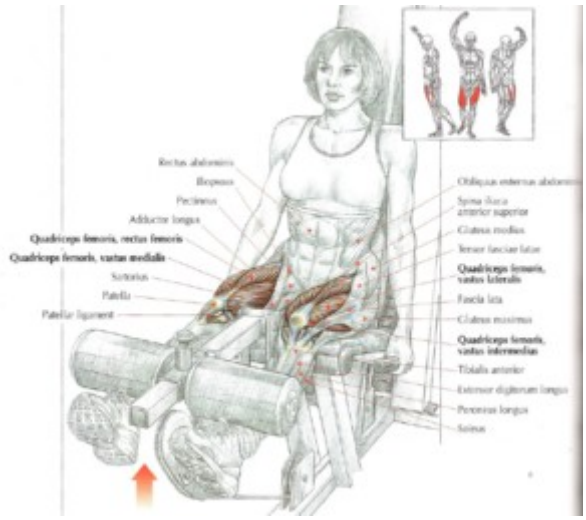


Incline Bench Sit-Ups

Leg Raises



Leg Extension



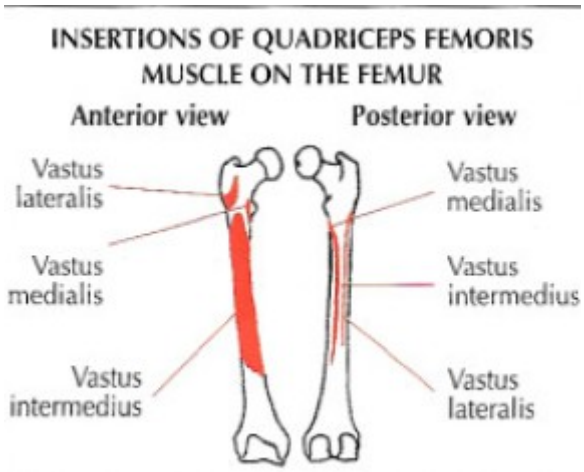
Sitting on the machine with your hands on the handles or the seat to keep your torso montionless. Your knees are bent and your ankles are under pads :

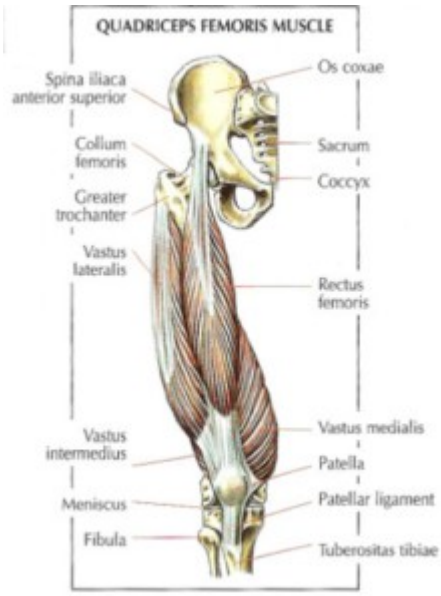
- Inhale and extend your legs to the horizontal.
- Exhale at the end of movement.

BEGINNING OF MOVEMENT

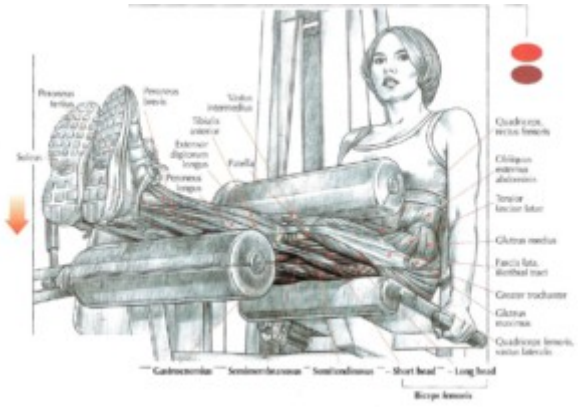
This exercise is great for working quadriceps. The more the seat's back is inclined, the more the pelvis is in retroversion. This has the effect of stretching the rectus femoris muscle which intensifies the work of quadriceps during the

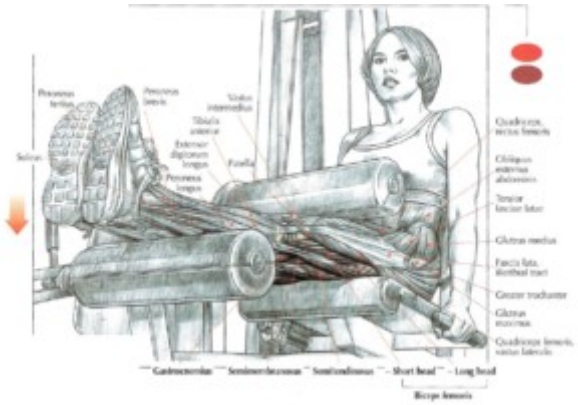
leg extension.





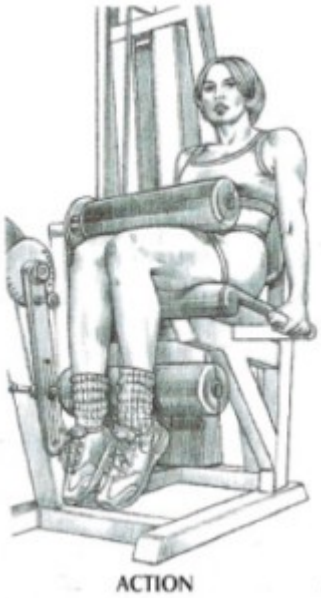
This exercise is recommended for beginners to gain strength to do exercises more technical later.





Sitting on the machine with your legs straight and your ankles on the pads. Your thighs wedged with your hands on the handles :

- Inhale and flex your legs
- Exhale at the end of the movement

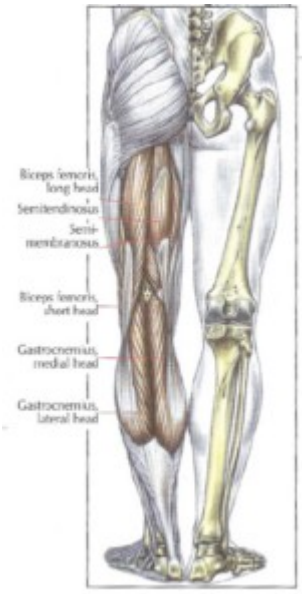


This exercise works all hamstrings muscles and in depth popliteus muscle. This exercise works a little bit the gastrocnemius muscles.

Note

Having a sitting position means that you have your pelvis anteversion and this allows you to stretch semi-membranous, semi-tendinous and long portion of biceps femoris favorably to better target the work on this muscle group.

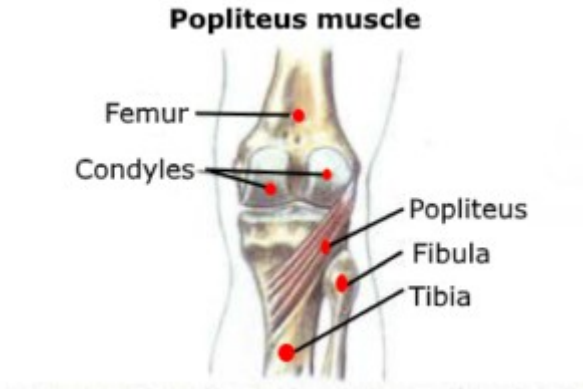
Variant



- By doing this exercise with your ankle in flexion, you transfer some of the work on your gastrocnemius muscles.

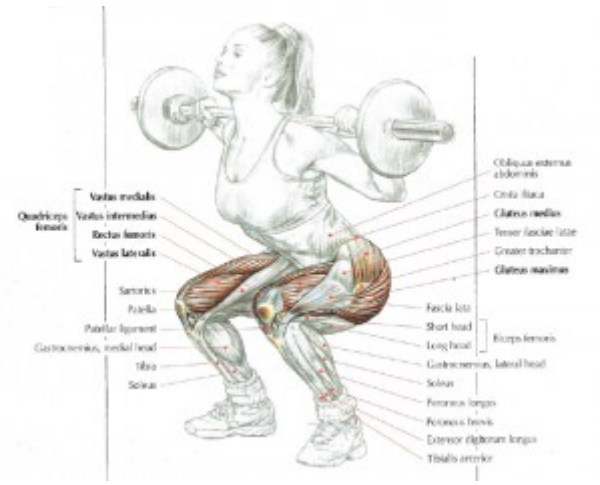
- By doing this exercise with your ankles in extension, you mainly target the effort on your hamstrings.

Popliteus muscle



Popliteus muscle is deep in the posterior side of the leg, on the level of the knee joint. This muscle works the hamstrings and gastrocnemius to flex the leg on the thigh.

Squat



Squat is the #1 exercise for bodybuilding because it works a lot of the muscular system and is great for the cardiovascular system. Squat allows to have a good thoracic expansion and a good respiratory capacity.

- Standing in front of the barbell resting on the support. Put yourself under the barbell and place the barbell on your trapezius a little higher that the

posterior deltoids. Take the barbell with a pronated grip. The spread of the hands is variable according to the morphology. Pull your elbows backwards.

- Inhale deeply (to maintain an intrathoracic pressure that will prevent your torso from sagging forward). Arch you back slightly, squeeze your abs, look forward and take off the barbell.

- Back 1 or 2 steps. Stop with your feet parallel (or slightly outward). Your feet are about your shoulders width. Squat down by tilting your back forward (the flexion axis passing through the hip joint). Control the descent without rounding your back to avoid injury.

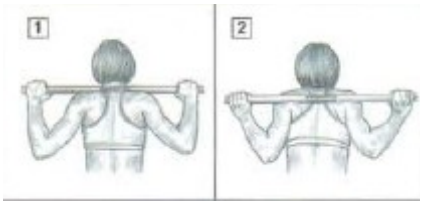
- When your femurs arrive horizontally, do an extension of your legs by straightening your torso to return to the starting position. Exhale at the end of the movement.

Squat works mainly quadriceps, glutes, adducteurs, erector spinae, abs and hamstring.

Note

Squat is one of the best moves to develop the gluteal curve.

2 Ways To Place The Barbell



1. On trapezius

2. On deltoids and trapezius like powerlifters

Variants

1. People with stiff ankles or long femurs can place a wedge under the heels to avoid too much torso inclinaison. This allows to postpone a part of the effort on quadriceps.

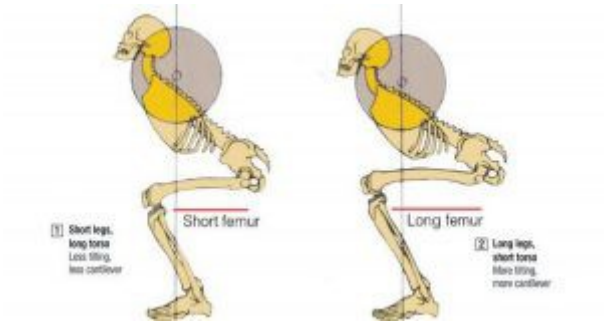
2. The barbell's position may be on the back (on the posterior deltoids). This reduce the cantilever by increasing the lifting power of the back which allows to take heavier weights. This is a technique used by powerlifters.

3. It's possible to do squat with the Smith machine, which makes it possible to avoid the torso inclinaison and to locate the effort on quadriceps.

How To Place The Feet

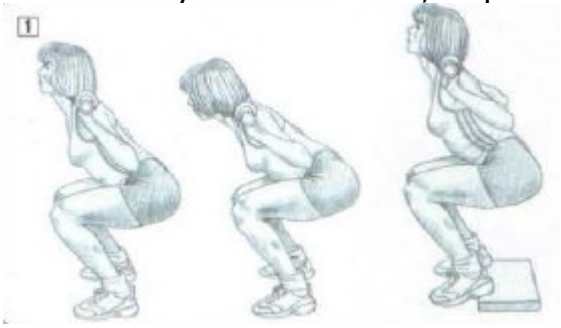
The feet position is important during the execution of the classic squat (feet apart at about the shoulders width). Feet should be in parallel or slightly outward. What is most important is to respect the person's morphology and to place the feet in the physiological axis of the knees. For example, if you walk with your feet out, squat with your feet out.

Different Torso's Inclinaison According To The Morphologies

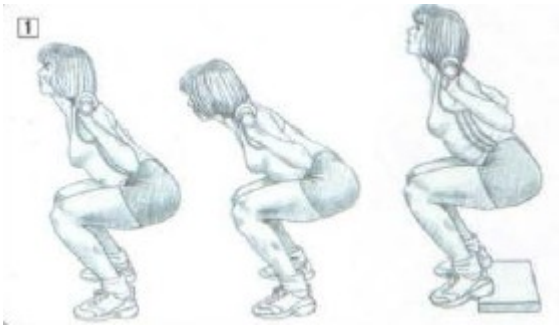


1. Short legs, long torso : slightly inclined torso, weak cantilever

2. Long legs, short torso : very inclined torso, important cantilever



Good Position



During the squat, the back should be as straight as possible throughout the movement. According of the morphologies (long/short legs, stiff/flexible ankles) and the different execution's technique (feet's position, use of compensated sole, barbell in up/down position), the torso could be very inclined or slightly inclined because flexion is done at the hip joint.

BAD POSITION

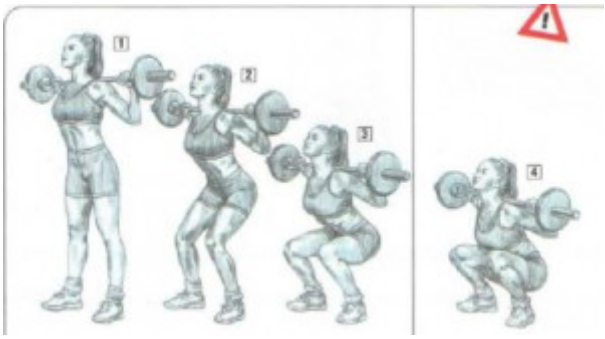
It's necessary not to round the back while performing the squat because this can create injuries in the lumbar region and spinal disc herniation.

Note

To really feel the work of the glutes, it's necessary to have the thighs horizontally.

1-3 : negatives phase

4: full squat



It's possible to have thighs lower than horizontal to better feel the glutes work but this technique can be done only by people who have short femurs or flexible ankles. It's necessary to be very careful with the full squat because it is really easy to round the back.

Attention

For all exercises done with very heavy weight, it's necessary to perform a « blocking » :

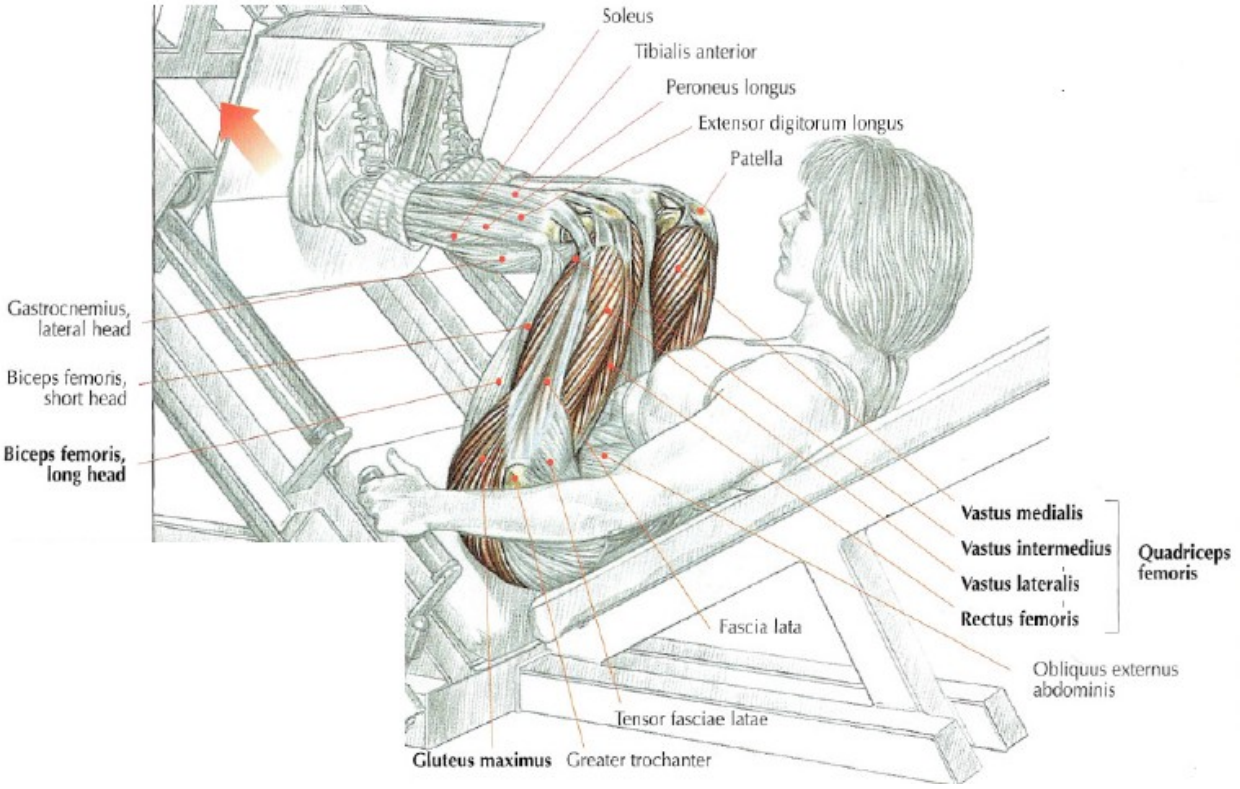
1. Take a deep breath and block the breathing to fill the lungs like a balloon. This stiffens the ribcage and prevents the top of the torso form tilting forward.

2. Squeeze abs stiffens the belly, This increases the intra-abdominal pressure and prevents the torse form sagging forward.

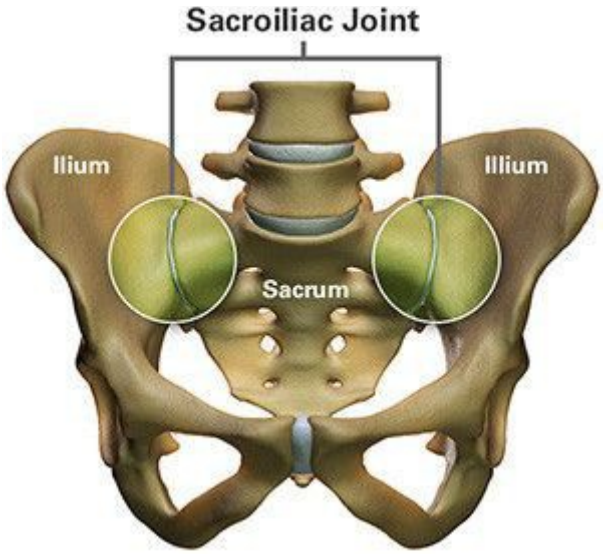
3. By slightly arching the lower back with lumbar squeeze, this allows to have the spine's bottom in extension.

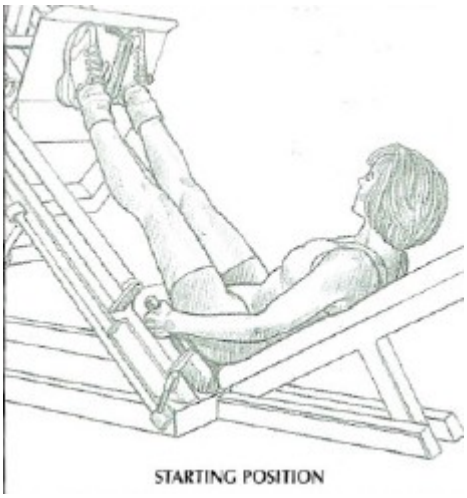
These 3 simultaneous actions is what we call « blocking ». This « blocking » has the function of avoiding the rounding or bending of the spine because with very heavy weights, it can create **disc herniations** .

Angled Leg Press



Warning : Using leg press with heavy weight may cause a displacement in the sacroiliac joint, which can lead to contracture.





Installed in the machine with your back on the back pad and your feet a little apart :

- Inhale and unlock security. Bend your legs as much as possible to have your thighs on the sides of your ribcage.

- Back to the starting position and exhale at the end of the movement.

The feet's position allows you to target certain muscles :

- Feet low on the plate work primary quadriceps

- Feet high on the plate work primary glutes and hamstrings.
- Feet apart on the plate work primary adductors.

Note

This exercise is good for people with back problems and who can't do squat. Attention, it's necessary not to take off the glutes of the back pad.

Deadlift

Standing in front of the barbell that is on the floor with your legs slightly apart. Your back is motionless and slightly arched :

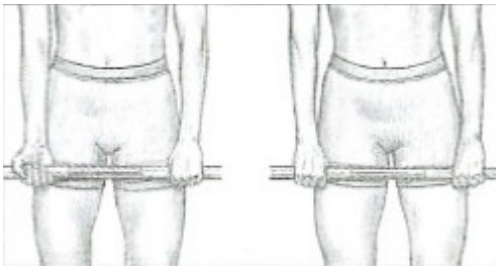
- Bend your legs so that your thighs are about horizontal. This position may be slightly different depending on the morphology and the flexibility of your ankles. For example, a person who has short arms and short femurs will have the thighs to the horizontal. A person who has long arms and long femurs will have the thighs a little higher than the horizontal.

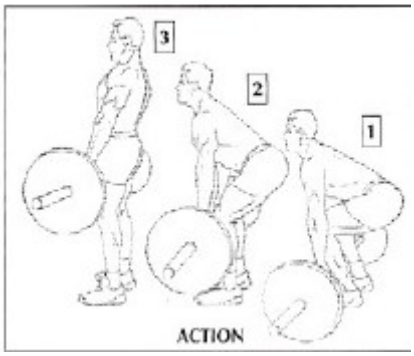
- Take the barbell with your arms outstretched and with a pronated grip. Your hands are spread to a little bit more than your shoulder's width. You can also have a hand with a pronated grip and the other with a supinated grip to prevent the barbell from rolling and lifting extremely heavy weights.

- Inhale, block your breath and squeeze your abs and your lumbar region. Lift the barbell by straightening your legs and lift the barbell in front of your shins.

- When the barbell comes to your knees level, you straighten your torso completely to finish your legs extended. Exhale at the end of the effort.

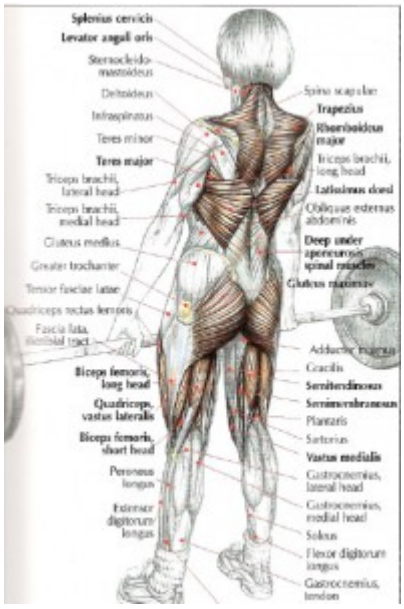
- Keep your body's extension (all your body is straight) for 2 seconds. Then go down with the barbell while you squeezing your abs and lumbar region to control the movement.





It’s very important not to round your back during the movement to avoid injury.

This exercise works all the body’s muscles, especially the glutes and quadriceps. This exercise builds solid hip, lower back, and trapezius.



Deadlift is part of the exercises carried out during powerlifting's competitions with squat and bench press.

Note

When you're doing an exercise with a very heavy weight, it's important that you do a « blocking » :

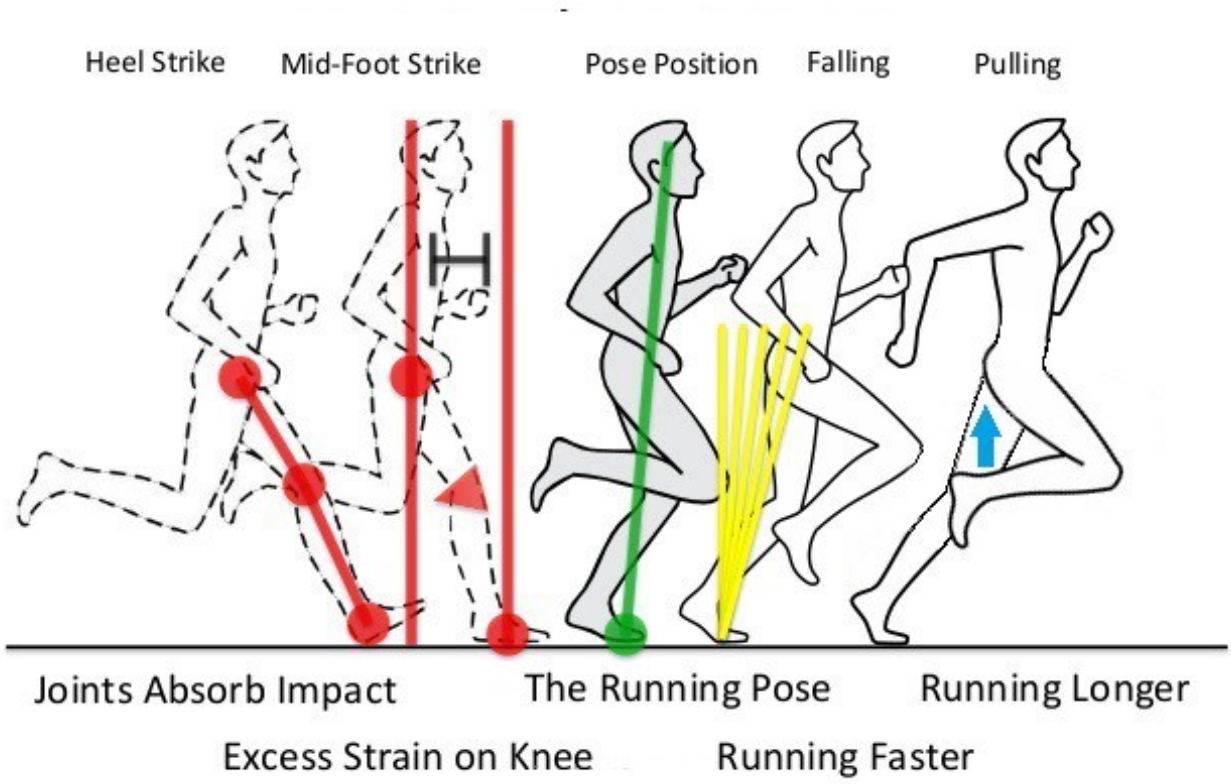
1. You fill your lungs like a balloon by taking a deep breath and blocking your breathing. This allows you to avoid your torso leaning forward and this stiffens your rib cage.

2. You squeeze your abs to stiffen your stomach and increase your intra-abdominal pressure. This prevents your torso from sagging forward.

3. You arch your lower back with a squeeze of your lumbar muscles and extend the bottom of the spine.

« Blocking » is these 3 actions. When you do these 3 actions simultaneously, this allows you to avoid rounding your back. Lift heavy weights with a rounded back cause the famous injury called **slipped disk**.

Day 5 (Cardio)



Running outside or on a treadmill at least 20 mins and max 55 mins.

Before you start

If you liked the illustrations and want to know more about exercises and anatomy, I advise you to buy the book of Frederic Delavier "Strenght Training Anatomy".

Let's go and show me what you got !!!

-Steph