chest

the chest has three parts: upper, middle, and lower. the middle and lower portions make up 80% of the chest mass, so it makes sense to focus on working these parts with more sets in flat bench presses/flyes than incline ones.

to train it, we should perform two types of movements:
1. flat bench presses and flyes (priority)
2. incline bench presses and flyes

additional note:
the chest has a greater mechanical advantage when it is stretched, so movements like dumbbell flyes where the peak resistance is at the stretched position will be more efficient for working the chest than movements like the machine flyes or peck deck where the peak resistance prioritizes the deltoid.

shoulder

the shoulder has 3 parts: anterior, medial, and posterior. almost all of them are responsible for arm abduction, thus they will work during lateral raises, with the medial part being the most recruited.

to train it, we should perform two types of movements:
1. lateral raises (priority)
2. overhead presses

additional note:
in an overhead press, the lateral part has a greater mechanical advantage up to 90 degrees, from 90 degrees upwards the anterior part takes advantage. therefore, if the exercise is only performed from 90 degrees upwards.

trapezius

the trapezius has 3 parts: upper, middle, and lower. however, functionally all three have the same main action, which is scapular retraction, being the only movement necessary to fully develop the trapezius.

to train it, we should perform one type of movement:
1. row with pronated grip or scapular retractions (priority)

additional note:
if you opt for rows for trapezius, direct posterior work is unnecessary (unless it’s a priority for you). otherwise, if you opt for scapular retractions, i suggest including a movement for the posterior shoulder like a reverse fly on the machine.

back

the back has 3 parts: upper, middle, and lower. in practice, we can group the last two together. the upper part will be heavily recruited in pull-ups or rows with the arm in front of the body, while the middle and lower parts in pull-ups with the arm at the side of the body.

to train it, we should perform two types of movements:
1. pull-ups or pull-downs with pronated grip (priority)
2. pull-ups/pull-downs or rows with neutral and supinated

additional note:
if we want to emphasize the middle and lower portion in a pull with a pronated grip, we can also use a resistance band to make the movement more difficult in the contracted position, where both are more

recruited.

biceps

although we refer to the entire front part of the arm as the biceps, in reality, we have 3 muscles: the biceps, the brachialis, and the brachioradialis. the biceps and the brachialis are more recruited in an exercise with the peak resistance in the elongated part, such as a curl on the scott bench, while the brachioradialis is more recruited in the contracted part.

to train it, we should perform 2 types of movement:
1. forearm flexion with emphasis on the elongated part (priority)
2. forearm flexion with emphasis on the contracted part

additional note:
the supination and pronation of the forearm also affect their work, with a supinated grip, the biceps have a greater mechanical advantage, while with a neutral or pronated grip, the brachialis and brachioradialis gain an advantage.

triceps

the triceps have 3 heads: the long head, the medial head, and the lateral head. the long head, which is the largest near the armpit, is more recruited when the arm is down close to our trunk, while the medial and lateral heads are more recruited when our arm is at a 90° angle or more from our trunk.

to train it, we should perform 2 types of movement:
1. forearm extension with the arm alongside the trunk (priority)
2. forearm extension with the arm at 90° or more from our trunk

additional note:
the medial and lateral heads are already quite recruited in bench presses and overhead presses, hence the priority being to work the long head of the triceps with direct work.

quadriceps

the quadriceps is a muscle group composed of 4 muscles: the rectus femoris, the vastus medialis, the vastus intermedius, and the vastus lateralis. they all extend the leg, but the rectus femoris is the only one that is bi-articular and besides extending the leg, it also flexes the hip (pulls the thigh towards the chest).

to train it, we should perform 2 types of movement:
1. leg extensions or substitutes (priority)
2. squats and leg presses

additional note:
the rectus femoris will not be well recruited in movements like squats or leg presses (in which it acts as an antagonist to hip extension), and for its proper development, it will be necessary to include movements solely for leg extension or solely hip flexion, hence the priority being leg extensions and substitutes like reverse nordic curls or sissy squats.

hamstrings

the hamstrings are a muscle group composed of the biceps femoris, the semimembranosus, and the semitendinosus, and they all perform both hip extension and knee flexion. hip extension movements will work better on the part closer to our buttocks, while knee flexion in any leg curl will target the part closer to our knee.

to train them, we should perform 2 types of movement:
1. knee flexion (priority)
2. hip extension exercises such as romanian deadlifts or 45º back extensions

additional note:
internal or external rotation of the leg will influence their work. if we internally rotate the leg, we recruit the medial hamstrings better, whereas if we externally rotate the leg, we recruit the lateral hamstrings more.

glutes

the glutes have two parts, the inferior part which mainly performs hip extension, and the upper part which, besides hip extension, also performs external rotation and abduction of the thigh.

to train them, we should perform 2 types of movement:
1. hip thrusts (priority)
2. hip abductions

additional note:
in all 3 movements, hip extension, external rotation of the thigh, and abduction of the thigh, the glutes have a mechanical advantage in the most contracted position of the movement, and for this reason, it makes sense to prioritize movements that have a peak resistance in that position, such as hip thrusts with a barbell instead of cable kickbacks.

calves

the calves are a muscle group called the triceps surae, which we can divide into 2: the soleus and the gastrocnemius (what we usually refer to when we say calves).

to train them, we should perform 1 type of movement:
1. any calf raise (priority)

additional note:
both are plantar flexors, but the gastrocnemius are also knee flexors, which raises the possibility of preferably working the soleus in movements where the leg is bent, such as the seated calf raise machine, but recent studies indicate that the triceps surae develops better overall in plantar flexors with the legs extended