

## SUPERSETS

A great tool to use in your training is the superset. This is two sets done back to back, with just enough time in between to go from one exercise to another. Three or more sets done this way is called a giant set. Supersets differ from circuit training, where a series of exercises, often done on machines with a time limit, are performed in sequence with little rest between. The purpose of circuit training is to maintain an elevated heart rate while training at a moderate intensity level. For people new to exercising whose goals are weight loss and overall strength and conditioning, circuit training can be a productive and time efficient. Supersets are done for different reasons and can be structured for achieving specific results. You might occasionally be doing back to back sets in your workout, but do you understand why you're doing them, and towards what end? It's not enough to just train harder...you have to train smarter, especially as you get older and injuries, recuperation, and free time loom larger. In this article I'll review some different types of supersets and how they work, along with specific examples and exercises. There are a couple of general benefits to adding supersets to your training. One is increasing the intensity and efficiency of your workout. More work in a given amount of time can increase not only your strength but conditioning also. The second is safety; it's a great tool if you lift by yourself or don't have a spotter available. Using certain equipment, you can push past momentary muscular failure and extend the time you're working without having someone to assist you.

**Pre Exhaust supersets** - This might be the most effective way to superset when done properly. It can help to override leverage disadvantages on compound exercises like bench presses, chins, rows, overhead presses, squats and leg presses, and deadlifts. As a chain is only as strong as its weakest link, so in a way is an exercise. Take the bench press for example. Many times a set comes to a grinding halt not from the pectorals being exhausted, but because the smaller, weaker triceps give out. For long limbed trainees this is magnified due to the distance the bar has to travel. Pre-exhausting (PE) is a way to increase the intensity and effectiveness of a big, compound exercise by doing an isolation exercise immediately before it. Let's say you don't often feel your pecs burning after you've pushed the last possible rep on a bench press, but instead it's your triceps or front deltoids that are on fire. PE is doing an isolation set, in this case a dumbbell fly or chest fly machine, to tire out the chest muscles before doing bench presses so the triceps and front delts can assist the pecs to actually reach failure during the set. The smaller muscles are fresh while the bigger muscle is suffering. After the second set is done you rest until you're ready for the next exercise. The late Mike Mentzer, a legendary bodybuilder from the 80's, based his book, "Heavy Duty" on the principal of doing brief, grueling workouts consisting of pre-exhaust supersets. Anyone who spent time in gyms back in the 70's and 80's will remember the older generation Nautilus machines designed by Arthur Jones. Some of these were 'double machines', made to do as a PE superset. Besides being a tool to combat leverage issues and creating a more even 'training field', PE is a good way to push past sticking points on stubborn exercises and body parts. Physically, you can do a PE workout for your chest or back and really feel like you've worked those muscles in a different way. Psychologically, the next time you do bench presses the 'regular' way, you'll feel stronger just by starting the set without already being halfway to exhaustion. Another benefit of PE supersets is you can train really hard by using less weight than you'd normally use on the second, compound exercise. Depending on the goal repetitions, you might have to reduce the weight by as much as 25-50% of what you'd normally use for that exercise. If you're working without a spotter you should use dumbbells or machines that you can safely get out of for the second set of the superset, as you'll be working to momentary muscular failure. Here are some examples of PE supersets that target

specific muscles ;

1. Leg extension machine – squat or deadlift - The large quadriceps muscles are weakened on the first set, assisted by the low back, hamstrings and gluteus on the second.
2. Leg curl machine – stiff leg deadlift or back extension - The hamstring is weakened on the first set, assisted by the low back and gluteus on the second.
3. Dumbbell or machine fly – bench press, pushup or dip - The pectorals are weakened on the first set, assisted by the shoulders and triceps on the second.
4. Lateral raise – overhead press - The deltoid (mostly the medial head) is weakened by the first set, assisted by the upper back muscles and triceps on the second.
5. Dumbbell or machine pullover – chin-up or pulldown - The latissimus dorsi and teres major are weakened on the first set, assisted by the biceps and forearm muscles on the second.
6. Shrug – deadlift or farmer carry - The trapezius are weakened on the first set, assisted by the thigh and hip muscles, and forearms on the second.

If your goal is to get bigger and stronger...pushing yourself until you can't do another repetition is vital to PE supersets. If you're working hard, don't do more than 2 supersets for each muscle group. You can do a whole workout this way or use a couple of them during a normal training session.

**Push - Pull supersets** - Simple in concept and satisfying to do, push-pull (PP) supersets have been a favorite of bodybuilders and lifters ever since commercial gyms became popular. In fact you probably have done these without even realizing it. A PP superset is two consecutive exercises working opposing muscles, the agonist and antagonist, in the same area of the body. In the upper arms it would be the triceps and biceps. In the thighs it's the quadriceps and hamstrings. In the torso the opposing muscle groups would be the pressing muscles (pectorals and deltoids), and the pulling muscles (latissimus dorsi, teres major, and other muscles of the upper and middle back). And the abdominal and midsection muscles and the opposing low and mid back erector spinae muscles. PP supersets allow you to hit different muscles in the same area of the body. Unlike pre exhaust supersets, you can often use near maximal weight for the second set and many lifters experience a great "pump" while doing them. When supersetting compound movements for the chest and back, there's more mutual involvement between muscle groups than there is with isolation exercises, which can affect the amount of weight used on the second set. For example, the lats work as assistors when bench pressing, and during a military press, all the back muscles work hard as stabilizers. Since the pecs and delts aren't as directly involved when pulling, working them first might allow for higher poundage to be used for both exercises, and make for a safer superset. With single joint, isolation exercises, this isn't an issue. For example, after finishing a set of leg extensions you go right into a set of leg curls. During the second set your hamstring muscles are working, while the quadriceps are still burning from the first set. And while the hamstrings are contracting, the quads are being stretched. It's this synergy, the push/pull between opposing muscles, that makes PP supersets a valuable tool to keep in your training toolbox. Here's some examples of specific supersets;

1. Bench press or dip – barbell or machine row.
2. Incline press – pulldown.
3. Military press – chin up.
4. Chest fly w/dumbbells or machine – bent over fly.
5. Leg extension – leg curl.
6. Hanging knee raise – stiff leg deadlift.

7. Abdominal crunch – back extension.
8. Barbell curl – triceps push-down.
9. Overhand wrist curl – underhand wrist curl.
10. External shoulder rotation w/cable machine – external shoulder rotation w/same.

**Compound Set supersets** - The best definition of compound sets (CS) comes from the definitive text; *Designing Resistance Training Programs*, 2<sup>nd</sup> Edition, by Steven J. Fleck and William J. Kraemer. They say, “ The compound -set system is used by some bodybuilders to develop hypertrophy (Hatfield 1981). It may also be used to develop local muscular endurance. The compound set system involves performing an exercise for one muscle group and then, after little or no rest, performing another exercise for a muscle group in a different part of the body. This alternating of muscle groups continues until the desired number of sets is completed. Alternating of muscle groups allows the first muscle group to partially recover while the second is being exercised, and vice versa. As an example, triceps extensions and knee extensions may be alternated in the compound-set system.” This is a great explanation of a really practical and healthy way to boost your workouts. If you’re looking to get more work done without adding more time, doing CS supersets is the way to go. For best results, superset exercises for different areas of the body. Leg exercises alternated with upper body movements work particularly well, as there’s little to no crossover effect. Also, performing big exercises like squats, leg presses, deadlifts and power cleans between the isolation exercises will keep your heart rate up and improve overall conditioning. There’s too many examples of CS supersets to list, be creative and have fun with them. Some trainees like getting in their abdominal work this way, mixed in with the whole body.

Supersets are just one of many techniques that you can use to improve your muscle strength and size, and improve overall fitness. As with other training variations like forced reps and negatives, you can overuse them and feel overtrained, not just physically but mentally as well. Try to be open minded about your training, but don’t do things just because other people are doing them. Improve your knowledge of basic anatomy and biomechanics, so the next time some guy shows you the new, “must do” exercise, you’ll know if it has any merit. Train hard and with purpose...good luck!