

Resistance Training Programs – Part 2

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In Part 1, we revised and expanded on the basic loading principals for resistance training. This article will look at exercises and exercise order in a variety of different program structures.

Abbreviated Programs

Abbreviated programs are short full body programs, well suited to beginners and those on time restraints. These programs allow better retaining of exercise knowledge by beginners as only several basic exercises are taught. They also help to alleviate over training and allow effective periodization. In the table below, three abbreviated program templates are given.

Program 1	Program 2	Program 3
Squat	Leg Press	Lunge
Bench Press	Seated Chest Press	Incline Press
1 / 2 Sit Ups	Functional Sit Up	Core

The below table shows a 12 week programming approach using the three above programs:

Weeks	Day	Program	Comments
1-3	Monday, Wednesday, Friday	Program 1	1 – 2 (Two sets of each) 3 (Three sets of each)
4-6	Monday, Wednesday, Friday	Program 2	4 – 5 (Two sets of each) 6 (Three sets of each)
7-9	Monday, Wednesday, Friday	Program 3	7 – 8 (Two sets of each) 9 (Three sets of each)
10-12	Monday Wednesday Friday	Program 1 Program 2 Program 3	10 – 11 (Two sets of each) 12 (Three sets of each)

A subtle progression that can be added to the final program (weeks 10 to 12) above includes a slight volume increase for the major muscle groups (examples of the additional major group loading are in all caps in the table below).

Program 1	Program 2	Program 3
SQUAT	Leg Press	Lunge
LEG PRESS	PUSH UPS	SEATED ROW
Pull Down	SEATED CHEST PRESS	CHIN UPS
Bench Press	Seated Row	Incline Press
1/2 Sit Ups	Functional Sit Up	Core

Often, an initial response to this program is concern over the lack of shoulder, biceps and triceps exercises. However, the exercises chosen utilize these "missing" muscles, at one stage or another, as prime movers and hence are provided with a training stimulus.

Full Body Programs

Again, the program involves major compound exercises. However, smaller muscle groups are added to increase their stimulation. The progression from abbreviated programs to full body programs allows the luxury of again only teaching two to three new exercises, retaining time effectiveness. As the time taken to complete the abbreviated programs should improve with general gym/equipment experience (especially if the rest periods between sets were decreased as part of the progression), the addition of three or so new exercises should not adversely effect a client's time line too dramatically.

Program 1	Program 2	Program 3
Squat	Leg Press	Lunge
Bench Press	Seated Chest Press	Chin Ups
Pull Down	Seated Row	Push Up
Upright Row	High Pull into Push Press	Military Press
Bar Curl	Inc Curl	Alt Curl
Triceps Extension	Triceps Press	Triceps Pushdown
1/2 Sit Ups	Functional Sit Up	Core

As for the abbreviated programs, the same loading format can be applied to the full body programs. To further add progression to the major muscles, typical loading patterns (i.e., sets, reps/load and rest) can be manipulated.

Below is an example of a poorly designed full body program:

Program 1
Cable Row
Military Press

Squat
Chest Press
Biceps Curl
Triceps Push Down

Some common concerns with the above program include the following:

1. The cable row utilizes the erector spinae. These muscles are not only essential stabilizers for the squat, but they also protect the area most likely to suffer injury (i.e., the lower back). Solution: Either support the squat (FB) or the cable row (supported, T Bar, one arm supported row) or choose another exercise for leg (leg press) or back (pull down).
2. The military press will pre fatigue the anterior deltoid, causing it to become the limiting factor in the bench press, which limits chest training and increases the volume of shoulder training. Solution: Complete the chest exercise first.
3. The exercise that would most likely involve the highest neural activation, the squat, is being performed later in the session rather than in the beginning. Solution: Squat first.

Splits

There are various length splits. The most common are either two or three days in length. Two day splits allow a greater volume of training to be undertaken compared to a full body program. The split program also provides the opportunity for the client to train every day, yet still ensure a 48 hour recovery for working muscles.

The below table shows an example of an upper/lower body split program.

Day 1	Day 2
Squat	Bench Press
Leg Press	Dips
Leg Curl	Seated Row (Supported)
Calf Raise	Lat Pull Down
Core	Upright Row
Crunch	Inc Curl
	Triceps Push Down

The below table shows an example of a legs, back and biceps/chest, shoulder triceps split program:

Day 1	Day 2
Squat	Push Up
Leg Press	Dips
Seated Row	Military/Shoulder Press
Lat Pull Down	Triceps Push Down
Calf Raise	Crunch

Bar Curl

Below is an example of a poorly designed split program:

Day 1	Day 2
Bench Press	Squat
Cross Overs	Leg Press
Seated Row	Military Press
Lat Pull Down	Lateral Raise
Crunch	Triceps Push Down
Calf Raise	Bar Curl

Some common concerns with the above program include the following:

1. The muscles of the back assist to stabilize the trunk during squats and is therefore unknowingly trained two days in a row. (No recovery allowed). Solution: Either support the squat (FB) or the cable row (supported, T Bar, one arm supported row) or choose another exercise for leg (leg press) or back (pull down).
2. The anterior deltoid and triceps are trained with chest on Day 1 and again with shoulders and triceps on Day 2. (No recovery, high volume). Solution: Train chest, anterior shoulder and triceps on the same day. Even if an additional day was inserted into the program for recovery, the volume of training for the shoulders and triceps would still outweigh the volume for the chest.
3. Biceps and forearms are trained with back on Day 1 and again with biceps training on Day 2. (No recovery, high volume) Solution: Train back and biceps on the same day. Even if an additional day was inserted into the program for recovery, the volume of training for the biceps and forearms would still outweigh the volume for the back.
4. If the programs were to follow each other in a continuous cycle, problems #2 and #3 would be even more extreme.
5. Not only do the calves stabilize the lower limb, but they often lead to technique problems when squatting due to their limiting ROM (causing the squatter to raise onto the toes). If fatigued prior to squatting, the client could limit exercise technique and range of motion (due to fatigue and developed tension limiting flexibility). Train calves after squats and lunges.

Advanced trainers more commonly use three day splits as the intensity of training per muscle group is higher. The three day split allows a greater recovery to compensate for the increased training intensity.

Day 1	Day 2	Day 3
Lunge	Chins	Bench Press
Leg Press	Lat Pull Downs	Dips
Leg Curl	Seated Row (supported)	Incline Press
Standing Leg Curl	Bar Curl	Triceps Press
Calf Raise	Core	Stretching

Hybrid splits are combination splits and can be used to cater for individual needs. For example, a client who may only wish to train during the week (Monday through Friday) may use the following split:

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3 Day Split			2 Day Split	
Monday	Tuesday	Wednesday	Thursday	Friday
Leg Press	Chins	Dips	Leg Press	Bench Press
FB Squat	Flat Chins	Cross Overs	Squat	Cross Overs
Leg Curl	Lat Pull Downs	Incline Press	Leg Curl	Incline Pull Up
Calf Raise	Bar Curl	Lateral Raise	Calf Raise	Lat Pull Down
Sit Ups		Triceps Press	Core	Upright Row
			Crunch	Incline Biceps Curl
				Triceps Push Down

The hybrid program above shows a three day split Monday, Tuesday and Wednesday and a two day split Thursday and Friday.

Some things to keep in mind include:

- There is always a 48 hour break for the back to fully recover before conducting any leg work that requires stabilization (i.e., squats, lunges).
- Although the abdominals are trained the day before chest, their stabilization role is limited due to the exercises chosen.

Another type of hybrid split involves combining full body (or abbreviated programs) with split programs. These forms of splits can be useful for clients who cannot be accommodated for by full body (or abbreviated) programs alone, as their training days (i.e., Monday, Thursday and Friday) do not allow a 48 hour recovery between some sessions.

Full Body	2 Day Split	
Monday	Thursday	Friday
Squat	Lunge	Chin Up
Bench Press	Squat	T Bar Row
Lat Pull Down	Leg Curl	Dips
Incline Biceps Curl	Calf Raise	Bench Press
Triceps Push Down	Functional Sit Up	Incline Biceps Curl
Core		Triceps Push Down

The hybrid program above shows a full body program on Monday and a two day split Thursday and Friday.

To summarize, one must remember that no skill is needed to place a variety of training protocols and exercises down on a piece of paper. It is a skillful and dedicated practitioner who applies his or her programming from a scientific base and considers, cross considers and reconsiders every exercise choice, its order and impact on previous and following exercises and training days. In addition, all muscle loading volumes and intensities must be considered and all the loading parameters need to achieve a specific goal.

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