

Basic Resistance Exercise Prescription

The purpose of basic resistance exercise prescription is to provide the athlete with a practical experience that will advance their existing knowledge of resistance training.

To determine the athlete's 1RM we tested her on 4 major muscle groups. We wanted her to be able to improve skill and efficiency of each exercise. We started her off at a low load to make sure she had the proper technique. Once she had the proper technique we increased the weight and the athlete did as many reps as she could.

Clients Goals and Program.

For her two power training months we asked her to exercise at 80% of her 1 RM at the start then increase to 85% on the last week of each month. The goal was to increase her explosive power, training at a high intensity and a high load with low repetitions.

For testing we choose a barbell bench press, a cable pull down, barbell squats and a dumbbell Arnold press. To show how we calculated her 1 RM we'll use the barbell bench press as an example.

From table 2, the weight lifted was 55 lbs and it was raised 8 times. We look at table 1 and go down to 8 RM and see that the estimation was 80%. To determine their 1RM of that exercise we then divided the weight lifted by the percentage to get the estimated 1RM value.

$55 \text{ lbs} / 0.80\% = 68.75 \text{ lbs}$ or 69 lbs for the Barbell Bench Press

Table 1. Estimate of 1RM

1 RM	100%
2 RM	95%
3 RM	93%
4 RM	90%
5 RM	87%
6 RM	85%
7 RM	83%
8 RM	80%
9 RM	77%
10 RM	75%

Table2. Predicted 1 RM record sheet

Exercise	1 RM Test							New Resistance	
	Attempt # 1 (kg/lbs)	Reps (#)	Attempt # 2 (kg/lbs)	Reps (#)	Attempt # 3 (kg/lbs)	Reps (#)	Predicted 1RM (kg/lbs)	Strength (wt/reps)	Endurance (Wt/reps)
Barbell Bench Press	45 lbs 20.5 kg	10	50 lbs 23 kg	10	55 lbs 25 kg	8	69 lbs 31 kg	60 lbs/5	45lbs/15
Cable Pull Down	70 lbs 32 kg	10	80 lbs 36 kg	10	90 lbs 41 kg	6	106 lbs 48 kg	95 lbs/5	80 lbs/15
Barbell Squats	45 lbs 20.5 kg	10	55 lbs 25 kg	10	65 lbs	9	84 lbs 38 kg	70 lbs/5	55 lbs/15
Dumbbell Arnold Press	10 lbs 4.5 kg	10	15 lbs 6.8 kg	10	20 lbs 9 kg	8	25 lbs 11.3 kg	20 lbs/5	15 lbs/15

Exercise Videos

Barbell Bench Press

<http://exrx.net/WeightExercises/PectoralSternal/BBBenchPress.html>

Cable Pull Down

<http://exrx.net/WeightExercises/LatissimusDorsi/CBFrontPulldown.html>

Barbell Squats

<http://exrx.net/WeightExercises/Quadriceps/BBSquat.html>

Dumbbell Arnold Press

<http://exrx.net/WeightExercises/DeltoidAnterior/DBArnoldPress.html>