

## Calculation for 1 Rep Max for Resistance Training and Utilization of the 4x4 Matrix

**Warmup** (rest 3-4 minutes in-between sets)

- 10 reps with only the bar
- 8 reps with a light weight
- 6 reps with a moderately heavy weight
- 5 reps with a heavier weight
- 5 reps with a heavy weight
- 5 reps with an increased heavier weight
- (assuming form is okay)

You'll then take your final 5-rep weight and multiply it by the "1.15" used in the chart below.

**(5-rep weight X 1.15 = estimated 1-RM)**

| Number of Repetitions Performed | Percent of 1-Repetition Maximum | Multiply Weight Lifted By: |
|---------------------------------|---------------------------------|----------------------------|
| 1                               | 100                             | 1.00                       |
| 2                               | 95                              | 1.05                       |
| 3                               | 93                              | 1.08                       |
| 4                               | 90                              | 1.11                       |
| 5                               | 87                              | 1.15                       |
| 6                               | 85                              | 1.18                       |
| 7                               | 83                              | 1.20                       |
| 8                               | 80                              | 1.25                       |
| 9                               | 77                              | 1.30                       |
| 10                              | 75                              | 1.33                       |
| 11                              | 70                              | 1.43                       |
| 12                              | 67                              | 1.49                       |
| 15                              | 65                              | 1.54                       |

**Example:** Bar Squat performed for 5 reps with 135 lbs. on the last set. The goal is Hypertrophy.

$135 \text{ lbs} \times 1.15 = 155.25 \text{ lbs}$

Bar Squat 1 RM = 155.25 lbs

Goal of Hypertrophy: See 4x4 Matrix chart on next page.

60%-75% = 93.15 to 116.44 lbs

## The 4x4 Matrix

| 4 X 4 MATRIX | FREQUENCY     | INTENSITY                                  | VOLUME                 | REST          |
|--------------|---------------|--|------------------------|---------------|
| POWER        | 1-2X PER WEEK | 30-40% of 1 REP MAX<br>85-95% of 1 REP MAX | 1-4 REPS<br>1-2 SETS   | 4-6 MINUTES   |
| STRENGTH     | 3-4X PER WEEK | 75-85% of 1 REP MAX                        | 4-8 REPS<br>3-4 SETS   | 2-3 MINUTES   |
| HYPERTROPHY  | 4-6X PER WEEK | 60-75% of 1 REP MAX                        | 8-12 REPS<br>4-6 SETS  | 30-90 SECONDS |
| ENDURANCE    | 5-7X PER WEEK | < 60% of 1 REP MAX                         | 12-15 REPS<br>5-7 SETS | < 30 SECONDS  |