

RPE (Rate of Perceived Exertion) Chart

Overview

This comprehensive chart provides percentage-based conversions for RPE (Rate of Perceived Exertion) values in strength training across all rep ranges from 1-10 reps.

Conversion Tables

1 Rep Percentages

RPE Value	Percentage of 1RM
10.0	100.0%
9.5	97.8%
9.0	95.5%
8.5	93.9%
8.0	92.2%
7.5	90.7%
7.0	89.2%
6.5	87.8%
6.0	86.3%

2 Reps Percentages

RPE Value	Percentage of 1RM
10.0	95.5%
9.5	93.9%
9.0	92.2%

8.5	90.7%
8.0	89.2%
7.5	87.8%
7.0	86.3%
6.5	85.0%
6.0	83.7%

3 Reps Percentages

RPE Value	Percentage of 1RM
10.0	92.2%
9.5	90.7%
9.0	89.2%
8.5	87.8%
8.0	86.3%
7.5	85.0%
7.0	83.7%
6.5	82.4%
6.0	81.1%

4 Reps Percentages

RPE Value	Percentage of 1RM
10.0	89.2%
9.5	87.8%
9.0	86.3%
8.5	85.0%

8.0	83.7%
7.5	82.4%
7.0	81.1%
6.5	79.9%
6.0	78.6%

5 Reps Percentages

RPE Value	Percentage of 1RM
10.0	86.3%
9.5	85.0%
9.0	83.7%
8.5	82.4%
8.0	81.1%
7.5	79.9%
7.0	78.6%
6.5	77.4%
6.0	76.2%

6 Reps Percentages

RPE Value	Percentage of 1RM
10.0	83.7%
9.5	82.4%
9.0	81.1%
8.5	79.9%
8.0	78.6%

7.5	77.4%
7.0	76.2%
6.5	75.1%
6.0	73.9%

7 Reps Percentages

RPE Value	Percentage of 1RM
10.0	81.1%
9.5	79.9%
9.0	78.6%
8.5	77.4%
8.0	76.2%
7.5	75.1%
7.0	73.9%
6.5	72.3%
6.0	70.7%

8 Reps Percentages

RPE Value	Percentage of 1RM
10.0	78.6%
9.5	77.4%
9.0	76.2%
8.5	75.1%
8.0	73.9%
7.5	72.3%

7.0	70.7%
6.5	69.4%
6.0	68.0%

9 Reps Percentages

RPE Value	Percentage of 1RM
10.0	76.2%
9.5	75.1%
9.0	73.9%
8.5	72.3%
8.0	70.7%
7.5	69.4%
7.0	68.0%
6.5	66.7%
6.0	65.3%

10 Reps Percentages

RPE Value	Percentage of 1RM
10.0	73.9%
9.5	72.3%
9.0	70.7%
8.5	69.4%
8.0	68.0%
7.5	66.7%
7.0	65.3%

6.5 64.0%

6.0 62.6%

Example Use Cases

1. Calculating 1RM from Known Weight and RPE

Example A: Single Rep Performance

Given: 225 lbs × 1 rep at RPE 7

Looking up 1 rep at RPE 7 = 89.2% of 1RM

Calculation: 225 lbs / 0.892 = 252.2 lbs

Rounded to nearest 2.5 lbs = 252.5 lbs estimated 1RM

Example B: Multiple Rep Performance

Given: 185 lbs × 5 reps at RPE 8

Looking up 5 reps at RPE 8 = 81.1% of 1RM

Calculation: 185 lbs / 0.811 = 228.1 lbs

Rounded to nearest 2.5 lbs = 227.5 lbs estimated 1RM

2. Programming Working Weights

Example A: Working Up to Heavy Single

Target: 1 rep (single) at RPE 8 (92.2% of 1RM)

Known 1RM: 250 lbs

Calculation: 250 × 0.922 = 230.5 lbs

Rounded to nearest 2.5 lbs = 230 lbs for working sets

Example B: Volume Work

Target: 5 reps at RPE 7 (78.6% of 1RM)

Known 1RM: 250 lbs

Calculation: $250 \times 0.786 = 196.5$ lbs

Rounded to nearest 2.5 lbs = 197.5 lbs for working sets