# RPE (Rate of Perceived Exertion) Chart Reference

## Overview

This document contains percentage-based conversions for RPE values in strength training across rep ranges 1-10.

## Response Guidelines

IMPORTANT: When calculating RPE percentages or 1RM values:

Provide only the direct numerical answer
Round to nearest 2.5 lbs for weights
Do not include the example calculations in responses
Keep responses concise and focused on the numbers
Format: "Your [calculation type] is [number][unit]"

## Percentage Tables

### Single Rep (1 Rep)

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

### Two Reps (2 Reps)

- RPE 10.0 = 95.5% of 1RM
- RPE 9.5 = 93.9% of 1RM
- RPE 9.0 = 92.2% of 1RM
- RPE 8.5 = 90.7% of 1RM
- RPE 8.0 = 89.2% of 1RM

- RPE 7.5 = 87.8% of 1RM
- RPE 7.0 = 86.3% of 1RM
- RPE 6.5 = 85.0% of 1RM
- RPE 6.0 = 83.7% of 1RM

## Three Reps (3 Reps)

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

## Four Reps (4 Reps)

- RPE 10.0 = 89.2% of 1RM
- RPE 9.5 = 87.8% of 1RM
- RPE 9.0 = 86.3% of 1RM
- RPE 8.5 = 85.0% of 1RM
- RPE 8.0 = 83.7% of 1RM
- RPE 7.5 = 82.4% of 1RM
- RPE 7.0 = 81.1% of 1RM
- RPE 6.5 = 79.9% of 1RM
- RPE 6.0 = 78.6% of 1RM

## Five Reps (5 Reps)

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

## Six Reps (6 Reps)

- RPE 10.0 = 83.7% of 1RM

- RPE 9.5 = 82.4% of 1RM
- RPE 9.0 = 81.1% of 1RM
- RPE 8.5 = 79.9% of 1RM
- RPE 8.0 = 78.6% of 1RM
- RPE 7.5 = 77.4% of 1RM
- RPE 7.0 = 76.2% of 1RM
- RPE 6.5 = 75.1% of 1RM
- RPE 6.0 = 73.9% of 1RM

## Seven Reps (7 Reps)

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

## Eight Reps (8 Reps)

- RPE 10.0 = 78.6% of 1RM
- RPE 9.5 = 77.4% of 1RM
- RPE 9.0 = 76.2% of 1RM
- RPE 8.5 = 75.1% of 1RM
- RPE 8.0 = 73.9% of 1RM
- RPE 7.5 = 72.3% of 1RM
- RPE 7.0 = 70.7% of 1RM
- RPE 6.5 = 69.4% of 1RM
- RPE 6.0 = 68.0% of 1RM

## Nine Reps (9 Reps)

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

**Ten Reps (10 Reps)**

- RPE 10.0 = 73.9% of 1RM
- RPE 9.5 = 72.3% of 1RM
- RPE 9.0 = 70.7% of 1RM
- RPE 8.5 = 69.4% of 1RM
- RPE 8.0 = 68.0% of 1RM
- RPE 7.5 = 66.7% of 1RM
- RPE 7.0 = 65.3% of 1RM
- RPE 6.5 = 64.0% of 1RM
- RPE 6.0 = 62.6% of 1RM

# Example Use Cases

## 1. Calculating 1RM from Known Weight and RPE

Single Rep Example

- Given: 225 lbs × 1 rep at RPE 7
- RPE 7 for 1 rep = 89.2% of 1RM
- Calculation: 225 lbs / 0.892 = 252.2 lbs
- Rounded: 252.5 lbs estimated 1RM

Multiple Rep Example

- Given: 185 lbs × 5 reps at RPE 8
- RPE 8 for 5 reps = 81.1% of 1RM
- Calculation: 185 lbs / 0.811 = 228.1 lbs
- Rounded: 227.5 lbs estimated 1RM

## 2. Programming Working Weights

Heavy Single Example

- Target: 1 rep at RPE 8 (92.2% of 1RM)
- Known 1RM: 250 lbs
- Calculation: 250 × 0.922 = 230.5 lbs
- Working weight: 230 lbs

Volume Work Example

- Target: 5 reps at RPE 7 (78.6% of 1RM)
- Known 1RM: 250 lbs
- Calculation: 250 × 0.786 = 196.5 lbs

- Working weight: 197.5 lbs