

## **One Rep Maximum (1 RM)**

Although quoting (as a guide!) a working percentage value of One Repetition Maximum (1 RM) amongst the [www.gymprofessor.com](http://www.gymprofessor.com) sample gym routines, I (GP) would not typically recommend its use. The reason, most will train suitably for the given repetition range and, in this instance, testing is therefore unnecessary. It also must be considered that, if you are not used to performing low repetitions with heavy weight, both psychologically & physically you may not be adapt to perform your 'best' 1 RM, which has resulted in predicted 1 RM (the Brzycki Formula being a common method). However, in certain circumstances - trend analysis, lackluster clients, deconditioned clients - testing 1 RM (or predicted 1 RM), and applying a percentage value for a given number of repetitions, can be sensible.

I have always found that 99% of people performing various fitness tests want to reference (compare) themselves against others or a unit of measure, strength being no different. Hence, below I've listed a commonly used reference chart used against eight commonly performed gym exercises that relate to different muscle groups of the body. The reference chart provides a sensible unit of measure for most levels of fitness. That said, many reference charts have been developed with 'active' people in mind and, therefore, as may be expected anyway, many deconditioned clients are highly likely to achieve the worst scores possible (if a deconditioned client should be performing this fitness test at all).

Despite using the chart below for the last ten years, I cannot say (as I don't know) what organization is responsible for its publication. If, by chance, anyone reading this is aware of the college or organization responsible for the reference chart, please contact me, so that I may rightly attribute the chart to them.

When testing, it should be factored that some exercises and/ or exercise machines may vary from gym to gym. Likewise, you should factor and/ or make note of any other influencing factors toward either the lift or score for analysis. For example, as the analysis chart below uses bodyweight as a reference, an obese individual may score 'poor', but their main problem is likely to be their bodyweight, rather than their relative strength. Commonsense should be applied to your findings and analysis.

You should take note of the suggested pre-test precautions listed on the [www.gymprofessor.com](http://www.gymprofessor.com) website. Notably (in relation to this particular fitness test), the client should have performed relevant stretches and several warm-ups sets prior to attempting their 1 RM. Also, a spotter should be used at all times.

Please find the aforementioned reference chart below.

## One Rep Maximum (1 RM) Reference Chart

<b>FORMULA</b>		
<b>1 RM (Kg) ÷ Bodyweight (Kg) = Analysis Figure</b>		

<b>EXERCISE 1: BENCH PRESS (CHEST/ PECS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
1.20 +	0.48+	Excellent
0.99 to 1.19	0.41 to 0.47	Good
0.79 to 0.98	0.30 to 0.40	Average
0.69 to 0.78	0.21 to 0.29	Fair
0 to 0.68	0.20	Poor

<b>EXERCISE 2: NARROW-GRIP LAT PULLDOWNS (BACK/ LATS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
1.20 +	0.48+	Excellent
0.99 to 1.19	0.41 to 0.47	Good
0.79 to 0.98	0.30 to 0.40	Average
0.69 to 0.78	0.21 to 0.29	Fair
0 to 0.68	0.20	Poor

<b>EXERCISE 3: LEG PRESS (QUADRICEPS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
3.00 +	1.50 +	Excellent
2.00 to 2.99	1.00 to 1.49	Good
1.50 to 1.99	0.50 to 0.99	Average
1.00 to 1.49	0.25 to 0.49	Fair
0 to 0.99	0 to 0.24	Poor

<b>EXERCISE 4: LEG CURLS (HAMSTRINGS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
1.00 +	0.50 +	Excellent
0.75 to 0.99	0.40 to 0.49	Good
0.50 to 0.74	0.30 to 0.39	Average
0.25 to 0.49	0.20 to 0.29	Fair
0 to 0.24	0 to 0.19	Poor

<b>EXERCISE 5: BARBELL CURLS (BICEPS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
0.50 +	0.30 +	Excellent
0.40 to 0.49	0.20 to 0.29	Good
0.30 to 0.39	0.15 to 0.19	Average
0.20 to 0.29	0.08 to 0.14	Fair
0 to 0.19	0 to 0.70	Poor

<b>EXERCISE 6: MILITARY PRESS (SHOULDERS/ DELTOIDS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
0.75 +	0.30+	Excellent
0.60 to 0.74	0.20 to 0.29	Good
0.40 to 0.59	0.15 to 0.19	Average
0.20 to 0.39	0.08 to 0.14	Fair
0 to 0.19	0 to 0.70	Poor

<b>EXERCISE 7: NARROW-GRIP BENCH PRESS (TRICEPS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
0.75 +	0.48 +	Excellent
0.60 to 0.74	0.41 to 0.47	Good
0.40 to 0.59	0.30 to 0.40	Average
0.20 to 0.39	0.21 to 0.29	Fair
0 to 0.19	0 to 0.20	Poor

<b>EXERCISE 8: STANDING CALF RAISE (CALF/ GASTROCNEMIUS)</b>		
<b>MALE</b>	<b>FEMALE</b>	<b>RATING</b>
1.50 +	0.75 +	Excellent
1.00 to 1.49	0.60 to 0.74	Good
0.50 to 0.99	0.40 to 0.59	Average
0.25 to 0.49	0.20 to 0.39	Fair
0 to 0.24	0 to 0.19	Poor