

**FREE FALL IMPACT FORCE CHART**

Feet		6	10	20	30	50	100	200	300
Meter		1.83	3.05	6.10	9.14	15.24	30.48	60.96	91.44
Pounds	kg	Impact Force Rating in Pounds							
1	0.45	59.3	98.8	197.7	296.2	493.8	987.6	1,975.2	2,962.8
3	1.36	177.9	296.5	592.9	888.4	1,481.4	2,962.8	5,925.6	8,888.4
5	2.27	296.5	494.1	988.2	1,480.7	2,469.0	4,938.0	9,876.0	14,814.0
10	4.54	592.9	988.2	1,976.5	2,961.5	4,938.0	9,876.0	19,751.9	29,627.9
15	6.80	889.4	1,482.4	2,964.7	4,442.2	7,407.0	14,814.0	29,627.9	44,441.9
20	9.07	1,185.9	1,976.5	3,953.0	5,923.0	9,876.0	19,751.9	39,503.9	59,255.8
35	15.88	2,075.3	3,458.9	6,917.7	10,365.23	17,282.9	34,565.9	69,131.8	103,697.7
80	36.29	4,743.6	7,906.0	15,811.9	23,692.0	39,503.9	79,007.7	158,015.5	237,023.2

**CHART ASSUMPTIONS:** The chart assumes that full PPE is being worn and that the object is **blunt** with a minimal deceleration (Stopping Distance). Formula Used:  $0.5 * \text{Object Mass} * (\text{Velocity}^2) / \text{Stopping Distance}$

**CHART ACCURACY:** These calculations are intended to give a general idea of the potential severity of a dropped object. A detailed and specific risk assessment will always deliver a more accurate calculation of potential severity.

**CHART WARNING:** An object dropped at any height should be considered dangerous or even deadly. The purpose of this chart is to emphasize the enormous impact forces generated with an object dropped from height.