

Commonly found g levels

Table 1. Estimates of g levels

g Level	Application
0.61	Automobile, 0-60, 4.5 seconds
0.75	Automobile braking
1	Strong earthquake
1.8	Steep climb in Airbus A-300
2	Commercial appliance control
2	Kill sperm whale
3	Indy car on turn
3	Space shuttle taking off
3	Sneeze
3.3	Fuel dragster
3.5	Cough
4	Slap on Back
4.5	Titan Roller Coaster, 4 Flags, Texas
5	NASCAR vehicle on turn
6	Humans black out
9	Rocket dragster
10	Flutter testing - aircraft
10	Car crash that will break human bones
15	Jet aircraft ejection seat
19	Tiger Woods estimated golf swing
30	Break ribs when held by seat belt
33	When parachute opens
35	NASCAR vehicle hitting the wall
50	16 oz boxing glove punch
85	Estimated g's in Princess Diana's crash
100	6 oz boxing glove punch
100	Karate chop to the head
100	Under vehicle road testing
150	Jump of a flea
246	4 foot drop on grass football field
300	Foot hitting a soccer ball
300	Helmet testing
1000	Automotive impact testing
2000	Crash test dummies
2400	Dogwood flower releasing pollen
3000	Baseball struck by a bat
8000	Matis shrimp striking appendage
20000	Smart, gun-fired projectiles
60000	Explosions



The engineering unit used to measure acceleration is "g". 1 g is equivalent to 32.1741 ft/sec². An accelerometer with a range of ± 10 g's will measure acceleration from - 321.7405 ft/sec² to +321.7405 ft/sec². The value of 1 g is also expressed in other units such as inches (386.0885 in/ sec²) and meters (9.8057 m/ sec²).

Varying g levels are part of one's everyday life, whether accelerating in a car, taking off in an airplane, sneezing or riding a roller coaster. We often do not know how much the g level is – but we certainly feel it.

Left (Table 1) are estimates of commonly found g levels in everyday life and in well-known applications.

The Vibration Design Center in Aliso Viejo, California spearheads Measurement Specialties' global initiative to expand its accelerometer and vibration sensing business with customers in the automotive, medical, military / aerospace and consumer goods industries. This center spearheads Measurement Specialties' platform sensing technologies in silicon MEMS, piezoelectric polymer film, piezoelectric ceramic and bonded gage.

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