

BACK SQUAT

Strength Standards



Adult Men

Body Weight	Physically Inactive	Physically Active	Novice Trainee	Intermediate Trainee	Advanced Trainee	Elite Trainee
114	<77	77	143	176	237	320
123	<83	83	154	193	259	347
132	<88	88	171	204	281	369
148	<99	99	187	231	314	408
165	<110	110	204	248	342	446
181	<121	121	220	270	369	480
198	<127	127	231	287	391	507
220	<132	132	243	298	408	529
242	<138	138	254	309	424	551
275	<143	143	259	320	435	568
319	<149	149	270	325	446	579

Over 40 years old

114	<69	69	128	157	211	285
123	<74	74	137	172	231	309
132	<78	78	152	181	250	329
148	<88	88	167	206	280	363
165	<98	98	181	221	304	397
181	<108	108	196	240	329	427
198	<113	113	206	255	348	451
220	<118	118	216	265	363	471
242	<123	123	226	275	378	491
275	<128	128	231	285	388	505
319	<132	132	240	289	397	515

Over 50 years old

114	<63	63	116	143	192	259
123	<67	67	125	156	210	281
132	<71	71	138	165	228	299
148	<80	80	152	188	254	330
165	<89	89	165	201	277	362
181	<98	98	179	219	299	388
198	<103	103	188	232	317	411
220	<107	107	196	241	330	429
242	<112	112	205	250	344	446
275	<116	116	210	259	353	460
319	<121	121	219	263	362	469

Over 60 years old

114	<50	50	93	115	154	208
123	<54	54	100	125	168	226
132	<57	57	111	133	183	240
148	<64	64	122	150	204	265
165	<72	72	133	161	222	290
181	<79	79	143	176	240	312
198	<82	82	150	186	254	330
220	<86	86	158	193	265	344
242	<90	90	165	201	276	358
275	<93	93	168	208	283	369
319	<97	97	176	211	290	376

Over 70 years old

114	<42	42	79	97	130	176
123	<45	45	85	106	142	191
132	<49	49	94	112	155	203
148	<55	55	103	127	173	224
165	<61	61	112	136	188	246
181	<67	67	121	149	203	264
198	<70	70	127	158	215	279
220	<73	73	133	164	224	291
242	<76	76	139	170	233	303
275	<79	79	142	176	239	312
319	<82	82	149	179	246	318

A standard is what we can realistically expect someone with specific characteristics (male-female, young-old-older, newbie-world level competitor) to do in a particular exercise. When a standard is used, the criterion of measurement must be as specific as possible. For example, a standard should specify the lift or exercise to be done, the precise parameters of successful performance, the means of measurement along with the gender, age, and training state of the individual. Performance standards allow us to provide relative feedback about progress, to give direction in addressing fitness shortcomings, and they help us set short and long term goals. The standards presented here are for adults over 18-39 years of age, along with adjusted standards for each decade of the lifespan, 40 through 79. All standards are based on completing the exercises with no assistance, no supportive gear (weightlifting and inequipped powerlifting rules for strength standards), and using the complete range of motion as described in competitive rule books or as pictured above. **Physically Inactive** - Does not accumulate 30 minutes of physical activity per day. **Physically Active** - Accumulates 30 minutes or more of physical activity on most days of the week. May recreationally take part in sport or exercise 1-2 days per month. **Novice** - An individual who begins regular training with the intent to improve fitness. Definitions of novice to elite are derived from those in *Practical Programming for Strength Training* (Rippetoe & Kilgore, 2006). Standards are for a single maximal repetition (IRM, Max, PR, PB, etc.). The elite column does not represent the highest level of performance possible.

Adult Women

Body Weight	Physically Inactive	Physically Active	Novice Trainee	Intermediate Trainee	Advanced Trainee	Elite Trainee
97	<44	44	83	99	132	165
106	<50	50	88	105	143	176
115	<53	53	99	116	149	193
123	<55	55	105	121	160	198
132	<61	61	110	132	171	209
148	<66	66	121	138	187	231
165	<72	72	127	149	198	254
181	<77	77	138	165	215	270
198	<83	83	149	176	231	292
212	<88	88	160	187	243	303

Over 40 years old

97	<39	39	74	88	118	147
106	<44	44	78	93	128	157
115	<49	49	88	103	132	172
123	<51	51	93	108	142	177
132	<54	54	98	118	152	186
148	<59	59	108	123	167	206
165	<64	64	113	132	177	226
181	<69	69	123	147	191	240
198	<74	74	132	157	206	260
212	<78	78	142	167	216	270

Over 50 years old

97	<36	36	67	80	107	134
106	<40	40	71	85	116	143
115	<45	45	80	94	121	156
123	<46	46	85	98	129	161
132	<49	49	89	107	138	170
148	<54	54	98	112	152	188
165	<58	58	103	121	161	205
181	<63	63	112	134	174	219
198	<67	67	121	143	188	237
212	<71	71	129	152	196	246

Over 60 years old

97	<29	29	54	64	86	107
106	<32	32	57	68	93	115
115	<36	36	64	75	97	125
123	<37	37	68	79	104	129
132	<39	39	72	86	111	136
148	<43	43	79	90	122	150
165	<47	47	82	97	129	165
181	<50	50	90	107	140	176
198	<54	54	97	115	150	190
212	<57	57	104	122	158	197

Over 70 years old

97	<24	24	45	55	73	91
106	<27	27	49	58	79	97
115	<29	29	55	64	82	106
123	<30	30	58	67	88	109
132	<33	33	61	73	94	115
148	<36	36	67	76	103	127
165	<39	39	70	82	109	139
181	<42	42	76	91	118	149
198	<45	45	82	97	127	161
212	<49	49	88	103	133	167

Strength has a beneficial effect not only on your ability to function in day-to-day life, it also is associated with a reduction in the risk of premature death from any cause (yes, any cause). The weakest third of the population dies at a faster rate than the rest of the population. Getting strong and moving up into the intermediate level moves you into the strongest third of the population and provides the best protection from mortality. Moving to the higher levels of strength progression produces the best function at work and play as well as improving quality of life.

See *British Medical Journal* 12:337(7661): 92-95, 2008

