

Strength assessment norms tables

ACSM relative 1RM bench press norms data (2006) – males

Bench press (males)	Age					
	< 20	20-29	30-39	40-49	50-59	60+
Excellent	>1.34	>1.32	>1.12	>1.00	>0.90	>0.82
Above average	1.20-1.33	1.15-1.31	0.99-1.11	0.89-0.98	0.80-0.89	0.72-0.81
Average	1.07-1.19	1.00-1.14	0.89-0.98	0.81-0.88	0.72-0.79	0.67-0.71
Below average	0.90-1.06	0.89-0.99	0.79-0.88	0.73-0.80	0.64-0.71	0.58-0.66
Poor	<0.89	<0.88	<0.78	<0.72	<0.63	<0.57

ACSM relative 1RM bench press norms data (2006) – females

Bench press (females)	Age					
	< 20	20-29	30-39	40-49	50-59	60+
Excellent	>0.78	>0.81	>0.71	>0.63	>0.56	>0.55
Above average	0.66-0.77	0.71-0.80	0.61-0.70	0.55-0.62	0.49-0.55	0.48-0.54
Average	0.59-0.65	0.60-0.70	0.54-0.60	0.51-0.54	0.44-0.48	0.43-0.47
Below average	0.54-0.58	0.52-0.59	0.48-0.53	0.44-0.50	0.40-0.43	0.39-0.42
Poor	<0.53	<0.51	<0.47	<0.43	<0.39	<0.38

ACSM relative 1RM leg press norms data (2006) – males

Leg press (males)	Age					
	< 20	20-29	30-39	40-49	50-59	60+
Excellent	>2.28	>2.13	>1.93	>1.82	>1.71	>1.62
Above average	2.05-2.27	1.98-2.12	1.78-1.92	1.69-1.81	1.59-1.70	1.50-1.61
Average	1.91-2.04	1.84-1.97	1.66-1.77	1.58-1.68	1.47-1.58	1.39-1.49
Below average	1.71-1.90	1.64-1.83	1.53-1.65	1.45-1.57	1.33-1.46	1.26-1.38
Poor	<1.70	<1.63	<1.52	<1.44	<1.32	<1.25

ACSM relative 1RM leg press norms data (2006) – females

Leg press (females)	Age					
	< 20	20-29	30-39	40-49	50-59	60+
Excellent	>1.71	>1.68	>1.47	>1.37	>1.25	>1.18
Above average	1.60-1.70	1.51-1.67	1.34-1.46	1.24-1.36	1.11-1.24	1.05-1.17
Average	1.39-1.59	1.38-1.50	1.22-1.33	1.14-1.23	1.00-1.10	0.94-1.04
Below average	1.23-1.38	1.23-1.37	1.10-1.21	1.03-1.13	0.89-0.99	0.86-0.93
Poor	<1.22	<1.22	<1.09	<1.02	<0.88	<0.85

ACSM fitness categories by age group and gender – push-ups

Fitness category	Age and gender									
	20-29		30-39		40-49		50-59		60-69	
	M	F	M	F	M	F	M	F	M	F
Excellent	36	30	30	27	25	24	21	21	18	17
Very good	35-29	29-21	29-22	26-20	24-17	23-15	20-13	20-11	17-11	16-12
Good	28-22	20-15	21-17	19-13	16-13	14-11	12-10	10-7	10-8	11-5
Fair	21-17	14-10	16-12	12-8	12-10	10-5	9-7	6-2	7-5	4-2
Needs improvement	16	9	11	7	9	4	6	1	4	1

ACSM fitness categories by age group and gender – partial curl-ups

Fitness category	Age and gender									
	20-29		30-39		40-49		50-59		60-69	
	M	F	M	F	M	F	M	F	M	F
Excellent	25	25	25	25	25	25	25	25	25	25
Very good	24-21	24-18	24-18	24-19	24-18	24-19	24-17	24-19	24-16	24-17
Good	20-16	17-14	17-15	18-10	17-13	18-11	16-11	18-10	15-11	16-8
Fair	15-11	13-5	14-11	9-6	12-6	10-4	10-8	9-6	10-6	7-3
Needs improvement	10	4	10	5	5	3	7	5	5	2

Source: ACSM guidelines for exercise testing and prescription, 8th edition

Norms table for 1-minute sit-up test

Males	Age					
	< 20	20-29	30-39	40-49	50-59	60+
Excellent	>49	>44	>39	>34	>29	>29
Above average	44-48	39-43	34-38	29-33	24-28	24-28
Average	37-43	32-38	27-33	22-28	17-23	17-23
Below average	24-36	20-31	16-26	12-21	8-16	8-16
Poor	<24	<20	<16	<12	<8	<8

Females	Age					
	< 20	20-29	30-39	40-49	50-59	60+
Excellent	>42	>36	>30	>24	>18	>18
Above average	32-41	27-35	22-29	17-23	12-17	12-17
Average	25-31	21-26	17-21	13-16	9-11	9-11
Below average	19-24	15-20	11-16	7-12	3-8	3-8
Poor	<19	<15	<11	<7	<3	<3

Source: Y's way to physical fitness, Lawrence A Golding et al

YMCA bench press test – total lifts

Fitness category	Age and gender											
	18-25		26-35		36-45		46-55		56-65		65+	
	M	F	M	F	M	F	M	F	M	F	M	F
Excellent	64	66	61	62	55	57	47	50	41	42	36	30
	44	42	41	40	36	33	28	29	24	24	20	18
Good	41	38	37	34	32	30	25	24	21	21	16	16
	34	30	30	29	26	26	21	20	17	17	12	12
Above Average	33	28	29	28	25	24	20	18	14	14	10	10
	29	25	26	24	22	21	16	14	12	12	9	8
Average	28	22	24	22	21	20	14	13	11	11	8	7
	24	20	21	18	18	16	12	10	9	9	7	5
Below Average	22	18	20	17	17	14	11	9	8	8	6	4
	20	16	17	14	14	12	9	7	5	5	4	3
Poor	17	13	16	13	13	10	8	6	4	4	3	2
	13	9	12	9	9	6	5	2	2	2	2	0
Very poor	<10	6	9	6	6	4	2	1	1	1	1	0

Source: ACSM guidelines for exercise testing and prescription, 8th edition