DYNAMIC STRENGTH
1 Minute Push-Up

Males

AGE

%	20-29	30-39	40-49	50-59	60+	
99	100	86	64	51	39	
95	62	52	40	39	28	S
90	57	46	36	30	26	
85	51	41	34	28	24	
80	47	39	30	25	23	E
75	44	36	29	24	22	
70	41	34	26	21	21	
65	39	31	25	20	20	
60	37	30	24	19	18	G
55	35	29	22	17	16	
50	33	27	21	15	15	
45	31	25	19	14	12	
40	29	24	18	13	10	F
35	27	21	16	11	9	
30	26	20	15	10	8	
25	24	19	13	9.5	7	
20	22	17	11	9	6	P
15	19	15	10	7	5	
10	18	13	9	6	4	
5	13	9	5	3	2	VP
n	1,045	790	364	172	26	

Total n = 2,397

Norms are based on worksite wellness program participants at Texas Instruments (TI).

DYNAMIC STRENGTH

1 Minute Sit-Up

Males

AGE

%	<20	20-29	30-39	40-49	50-59	60+	
99	>62.0	>55.0	>51.0	>47.0	>43.0	>39.0	
95	62.0	55.0	51.0	47.0	43.0	39.0	S
90	55.0	52.0	48.0	43.0	39.0	35.0	
85	53.0	49.0	45.0	40.0	36.0	31.0	
80	51.0	47.0	43.0	39.0	35.0	30.0	E
75	50.0	46.0	42.0	37.0	33.0	28.0	
70	48.0	45.0	41.0	36.0	31.0	26.0	
65	48.0	44.0	40.0	35.0	30.0	24.0	
60	47.0	42.0	39.0	34.0	28.0	22.0	G
55	46.0	41.0	37.0	32.0	27.0	21.0	
50	45.0	40.0	36.0	31.0	26.0	20.0	
45	42.0	39.0	36.0	30.0	25.0	19.0	
40	41.0	38.0	35.0	29.0	24.0	19.0	F
35	39.0	37.0	33.0	28.0	22.0	18.0	
30	38.0	35.0	32.0	27.0	21.0	17.0	
25	37.0	35.0	31.0	26.0	20.0	16.0	
20	36.0	33.0	30.0	24.0	19.0	15.0	P
15	34.0	32.0	28.0	22.0	17.0	13.0	
10	33.0	30.0	26.0	22.0	15.0	10.0	
5	27.0	27.0	23.0	17.0	12.0	7.0	
1	<27.0	<27.0	<23.0	<17.0	<12.0	<7.0	VP
n	46	312	1,431	1,558	919	205	

Total n = 4,471

Norms are based on Cooper Clinic patients.

CARDIORESPIRATORY FITNESS TESTS

Males

	AGE 20-29				AGE 30-39				
%	Balke Treadmill (time)	Max $\dot{V}O_2$ (ml/kg/min.)	12 min. Run Distance (miles)	1.5 Mile Run (time)	Balke Treadmill (time)	Max $\dot{V}O_2$ (ml/kg/min.)	12 min. Run Distance (miles)	1.5 Mile Run (time)	
99	31:03	59.8	1.98	8:35	30:00	58.3	1.93	8:49	
95	28:01	55.4	1.86	9:18	27:02	54.0	1.82	9:34	S
90	26:40	53.5	1.80	9:40	25:22	51.6	1.75	10:02	
85	25:30	51.8	1.75	10:00	24:12	49.9	1.70	10:24	
80	25:00	51.1	1.73	10:09	23:03	48.3	1.66	10:47	E
75	23:09	48.4	1.66	10:45	22:10	47.0	1.62	11:06	
70	22:30	47.5	1.63	10:59	21:30	46.0	1.59	11:22	
65	22:00	46.8	1.61	11:10	21:00	45.3	1.57	11:33	
60	21:05	45.4	1.58	11:31	20:05	44.0	1.54	11:56	G
55	20:30	44.6	1.55	11:45	20:00	43.9	1.53	11:58	
50	20:00	43.9	1.53	11:58	19:00	42.4	1.49	12:25	
45	19:02	42.5	1.49	12:23	18:05	41.1	1.46	12:50	
40	18:30	41.7	1.47	12:38	17:39	40.5	1.44	13:04	F
35	18:00	41.0	1.45	12:53	17:00	39.5	1.41	13:24	
30	17:15	39.9	1.42	13:16	16:20	38.6	1.39	13:46	
25	16:31	38.8	1.39	13:40	15:41	37.6	1.36	14:09	
20	15:46	37.8	1.36	14:06	15:00	36.7	1.33	14:34	P
15	15:00	36.7	1.33	14:34	14:01	35.2	1.29	15:13	
10	13:31	34.5	1.27	15:35	13:00	33.8	1.25	15:58	
5	11:18	31.3	1.18	17:22	11:11	31.1	1.18	17:29	
1	7:40	26.1	1.04	21:25	8:00	26.5	1.05	20:58	VP
	n=2,463				n=13,308				

Updated: 2013

Important note: Previous versions of our norms included all Cooper Clinic patient visits. These updated cardiorespiratory fitness norms include the results of the first visit only. We feel the norms are more valid with this current approach.

CARDIORESPIRATORY FITNESS TESTS

Males

%	AGE 40-49 Balke Treadmill (time)	AGE 40-49 Max $\dot{V}O_2$ (ml/kg/min.)	AGE 40-49 12 min. Run Distance (miles)	AGE 40-49 1.5 Mile Run (time)	AGE 50-59 Balke Treadmill (time)	AGE 50-59 Max $\dot{V}O_2$ (ml/kg/min.)	AGE 50-59 12 min. Run Distance (miles)	AGE 50-59 1.5 Mile Run (time)	
99	28:30	56.1	1.87	9:10	27:00	54.0	1.81	9:34	
95	26:00	52.5	1.77	9:51	23:31	49.0	1.67	10:38	S
90	24:00	49.7	1.69	10:28	24:56	46.7	1.61	11:11	
85	23:00	48.2	1.65	10:48	20:31	44.6	1.55	11:45	
80	21:44	46.4	1.60	11:16	19:39	43.4	1.52	12:07	E
75	20:41	44.9	1.56	11:41	18:36	41.9	1.48	12:36	
70	20:01	43.9	1.53	11:58	18:00	41.0	1.45	12:53	
65	19:30	43.2	1.51	12:11	17:14	39.9	1.42	13:17	
60	19:00	42.4	1.49	12:25	16:45	39.2	1.40	13:32	G
55	18:00	41.0	1.45	12:53	16:01	38.1	1.37	13:57	
50	17:25	40.1	1.43	13:11	15:29	37.4	1.35	14:16	
45	17:00	39.5	1.41	13:24	15:00	36.7	1.33	14:34	
40	16:15	38.5	1.38	13:49	14:16	35.6	1.30	15:03	F
35	15:45	37.7	1.36	14:07	13:52	35.0	1.29	15:20	
30	15:01	36.7	1.33	14:34	13:00	33.8	1.25	15:58	
25	14:30	35.9	1.31	14:53	12:30	33.0	1.23	16:21	
20	13:48	34.9	1.28	15:22	12:00	32.3	1.21	16:46	P
15	13:00	33.8	1.25	15:58	11:00	30.9	1.17	17:38	
10	12:00	32.3	1.21	16:46	10:00	29.4	1.13	18:38	
5	10:01	29.5	1.13	18:37	8:20	27.0	1.07	20:53	
1	7:01	25.1	1.01	22:20	5:25	22.8	0.95	25:01	VP
	n=19,566				n=11,693				

Updated: 2013

Norms are based on Cooper Clinic patients.