

Web table A. Characteristics of studies included in the review

Reference	Source*	Study name and country	Characteristics of study population - Mean (sd) age (y) at baseline; range (where available) - % female	Measures of physical capability examined (mean (sd))	Ascertainment of mortality	Length of follow-up	QA score†
Ahmad and Bath, 2005 ⁹	Both	Nottingham Longitudinal Study of Activity and Ageing, UK	- 75.3 (6.1); 65-99 - 60.5%	Grip strength Men: 342.36N (89.11) Women: 197.73N (59.39)	Record linkage (UK NHS central register)	21 years	6.5
Al Snih et al, 2002 ¹⁰	Both	Hispanic Established Population for the Epidemiological Study of the Elderly (H-EPESE), USA	- 72.8 (6.4); 65-85+ - 57.5%	Grip strength Men: 28.7kg (9.3) Women: 18.3kg (6.5) Walking time (8 feet) Men: 7.6s (6.4) Women: 8.1s (5.6)	Record linkage (Social Security Administration's Death Master files) and reports from relatives	5 years	8
Anstey et al, 2001 ¹¹	Both	Australian Longitudinal Study of Ageing, Australia	- 78.2 (7.0); 70-85+ - 53.9%	Grip strength Men: 30.4kg (7.5) Died: 18.8kg (5.5)	Assessed at each wave and confirmed by official death records	Average: 4 years 9 months	8
Cawthon and Ensrud ^{38;40}	Au	Osteoporotic Fractures in Men (MrOS) study, USA	- 73.5 (5.8); 65-100 - 0 i.e. 100% male	Grip strength Men: 38.7kg (8.1) Chair rises Descriptives not provided	Death certificates	7.01 years	n/a

Cawthon and Ensrud ³⁹	Au	Study of Osteoporotic Fractures (SOF), USA	- 71.7 (5.3); 65-99 - 100%	Grip strength Women: 20.9kg (4.3) Chair rises Descriptives not provided	By contact every 4 months with confirmation by death certificate	14.5 years	n/a
Cesari et al, 2005 ¹²	PO	Health, Aging and Body Composition (ABC) study, USA	- 74.2 (2.9) - 51.5%	Walking speed Men and women: 1.17m/s (0.24)	Death certificates	Average: 4.9 years	8
Cesari et al, 2008 ¹³	PO	“Invecchiamento e Longevita nel Sirente” ilSIRENTE study, USA	- 85.6 (4.8); 80+ - 67%	Grip strength Died: 27.7kg (14.4) Alive: 33.2kg (13.7) Walking speed Died: 0.35m/s (0.30) Alive: 0.55m/s (0.28) Chair rises Relevant summary statistics not reported Standing balance Relevant summary statistics not reported	Reported by General Practitioners and confirmed by the National Death Registry	Up to 2 years (mean 1.8 years)	8
Cesari et al, 2009 ¹⁴	PO	Health, Aging and Body Composition (ABC) study, USA	- 73.6 (2.9); 70-79 - 51.6%	Walking speed Men and women: 1.18m/s (0.23) Chair rises (5) Men and women: 14.3s (4.0) Standing balance (max. score 90s) Men and women: 67.6s	Death certificates	Average: 6.9 years	8

				(23.4)			
Fujita et al, 1995 ¹⁵	PO	Prospective study of health-promotion center attendees, Japan	- Men: 53.6 (9.0), Women 54.5 (8.5); 40+ - 50.2%	Grip strength Men: 41.8kg (7.7) Women: 25.4kg (4.9)	Reported by family members and friends	6.1 years	6
Gale et al, 2007 ¹⁶	Both	Department of Health and Social Security Survey follow-up, UK	- 74.6 (5.97); 65-92 - 43.5%	Grip strength Men: 68.7kg (15.7) Women: 46.1kg (10.6)	Record linkage (UK NHS central register)	24 years	7.5
Guralnik and Patel ⁴³	Au	Established Populations for Epidemiologic Studies of the Elderly (EPESE), USA	- 87.7 (5.6); 70-103 - 64.7%	Chair rises (5) Men: 13.6s (4.5) Women: 14.9s (5.3) Standing balance (3 tests each held for 10s) Relevant summary statistics not available	Record linkage (National Death Index)	Median 4.8 years, up to 6 years	n/a
Hardy et al, 2007 ^{17;18}	PO	Prospective cohort study (name not given), USA	- 73.9 (5.6); 65+ - 44.4%	Walking speed Men and women: 0.88 m/s (0.24)	Record linkage (Social Security National Death Index)	Up to 11 years	8
Katzmarzyk and Craig, 2002 ¹⁹	Both	Canadian fitness survey, Canada	- 35.7 (11.8); 20-69 - 51.5%	Grip strength Men: 53.8kg (8.4) Women: 32.5kg (5.5)	Record linkage (Canadian mortality database)	12.5 years	7.5
Klein et al ⁴⁴	Au	Beaver Dam Eye Study Cohort, USA	- 68.9 (9.8); 53-97 - 57.0%	Grip strength Men: 41.08kg (10.66) Women: 23.37kg (6.75) Walking time (8 feet) Men: 2.86s (0.75) Women: 3.06s (1.05)	Ascertained at regular follow-up attempts	Average 3.53 years, up to 4.8 years	n/a

Laukkanen et al, 1995 ²⁰	PO	EVERGREEN project, Finland	- All aged 75 or 80y - Sex distribution not reported (men and women included)	Grip strength Relevant summary statistics not reported Walking time (10m) 75y olds: 7.18s (4.12) 80y olds: 8.49s (3.62)	Record linkage (Official register or province and hospital records)	48 – 58 months	5
Markides et al, 2001 ³⁵	PO	H-EPESE, USA	- Mean age not reported; 65+ - 58%	Walking time (8 feet) Relevant summary statistics not reported	Record linkage (National Death Index) and reports from relatives	2 years	7
Metter et al, 2002 ²¹	Both	Baltimore Longitudinal Study of Aging, USA	- 50.1 (16.8); 18.1-98.5 - 0 i.e. 100% male	Grip strength Men: 95.7kg (18.8) (both hands combined)	Record linkage (annual searches of National Death Index), telephone follow-up of non-respondents and correspondence from relatives	Average 22.7 years (up to 40.1 years)	6.5
Milne et al, 1984 ²²	PO	Edinburgh Longitudinal Study of Ageing, UK	- Mean age not reported; 62-90 - 57%	Grip strength Relevant summary statistics not reported	Not reported	5 years	3
Newman et al, 2006 ²³	PO	Health ABC Study, USA	- Men: 73.7 (2.9), Women: 73.4 (2.8); 70-79 - 51%	Grip strength Men: 40.8kg (8.5) Women: 25.1kg (5.8)	Hospital records, death certificates and informant interviews	Average: 4.9 years (up to 6 years)	8
Ostir et al, 2007 ³⁶	PO	H-EPESE, USA	- 72.0 (sd not reported); 65+ - 58.3%	Walking time (8 feet) Relevant summary statistics not reported	Record linkage (National Death Index) and reports from relatives	7 years	8

Perera et al, 2005 ²⁴	PO	Prospective cohort study (name not given), USA	- 73.9 (5.6); 65+ - 44.4%	Walking speed Men and women: 0.88 m/s (0.24)	Record linkage (Social Security National Death Index)	5 years	8
Rantanen et al, 2000 ²⁵	Both	Honolulu Heart Program, Hawaii, USA	- 54 (sd not reported); 45-68 - 0 i.e. 100% male	Grip strength Men: 39.2kg (sd not reported)	Newspaper obituaries, listings of death certificates and record linkage from 1991 onwards (National Death Index)	Up to 30 years	8
Rolland et al, 2006 ²⁶	Both	EPIDOS study, France	- 80.5 (3.76); 75-100 - 100%	Grip strength Women: 52.76 N/m ² (13.1) Walking speed Women: 0.89m/s (0.2) Chair rises (5 times) Women: 17.15s (8.1) Standing balance Women: 24.52s (6.5)	Through regular contact with study participants and by telephone calls to proxies and physicians	Up to 4 years	7.5
Rosano et al, 2008 ²⁷	PO	Cardiovascular Health Study, USA	- 74.0 (4.6) - 56.8%	Walking speed Men and women: 0.96m/s (0.2)	Ascertained according to adjudicated events	Median: 8.4 years	7
Rothman et al, 2008 ²⁸	PO	Precipitating Events Project (PEP), USA	- 78.4 (5.3); 70+ - 64.6%	Grip strength 54% had 'low' grip strength Walking time (back and forth over 10 foot	Review of local obituaries and through informants reports	Up to 7.5 years	7

				course) 43% had walking time >10s			
Sasaki et al, 2007 ²⁹	Both	Adult Health Study Cohort, Japan	- 54.3 (10.82); 35- 74 - 65.8%	Grip strength Men: 46.7kg (8.96) Women: 29.3kg (6.31)	Record linkage (through Japan's obligatory household registry system)	29.4 years	7.5
Shibata et al, 1992 ³⁰	PO	The Koganei Study, Japan	- Mean age not reported; 69-71 - 53.3%	Grip strength Men: 35.4kg (6.9) Women: 19.3kg (4.8)	Record linkage (assessment of resident registration) and annual follow-up	10 years	6
Syddall et al, 2003 ³¹	Both	Hertfordshire Ageing Study, UK	- 67.5 (2.4); 64-74 - 42.4%	Grip strength Men: 38.3kg (7.1) Women: 22.5kg (5.3)	Record linkage (UK NHS central register)	4 years 10 months	6.5
Takata et al, 2007 ³²	PO	Study of Fukuoka Prefecture residents, Japan	- All participants aged 80 - 60.3%	Grip strength Men: Survived: 32.4kg (6.0); Died: 29.6kg (7.4) Women: Survived: 21.1kg (4.0); Died: 19.4kg (4.3) Standing balance (up to 120s with eyes open) Men: Survived: 17.9s (10.1); Died: 12.1s (15.0) Women: Survived:	Record linkage (resident registration cards and death certificates)	4 years	7

				11.3s (11.9); Died: 13.1s (16.6)			
van den Beld et al ⁴⁶	Au	The Zoetermeer Study, The Netherlands	- 77.8 (3.58); 73-94 - 0 i.e. 100% male	Grip strength Men: 34.3kg (6.93) Walking time (8 feet) Men: 2.9s (0.99) Chair rises (5 times) Men: 12.0s (3.8)	Not reported	8 years	n/a
Willcox et al, 2006 ³³	Both	Honolulu Heart Program and Honolulu Asia Aging Study, Hawaii, USA	- 54; 45-68 - 0 i.e. 100% male	Grip strength Men: 38.39kg (range: 8-63)	Obituaries in local newspapers and surveillance of hospital discharge records	Up to 43 years (mean: 27 years)	7
Woo et al, 1999 ³⁷	Both	Hong Kong Old-Old Study, Hong Kong	- 79.7 (7.13); 70-107 - 49.2%	Walking time (16 feet) Men: 11.8s (6.49) Women: 14.7s (10.13)	Reports from relatives and caregivers and search of Death registry	Average: 38.74 months	6.5

* Source of results for inclusion in review

Both: Results available in published paper and additional results also provided for review by author

PO: Results available from published paper only

Au: Results provided by author, not available in published paper

† Quality assessment score (maximum score:8) – average of 2 independent assessor's scores presented