ACADEMIA LATINOAMERICANA DE MEDICINA DEL ADULTO MAYOR
ALMA

Organización Panamericana de la Salud
Oficina Regional de la Organización Mundial de la Salud

VII Curso ALMA

La valoración funcional, ¿Equivalente de la valoración motora?

Manaos, Brasil, 2008

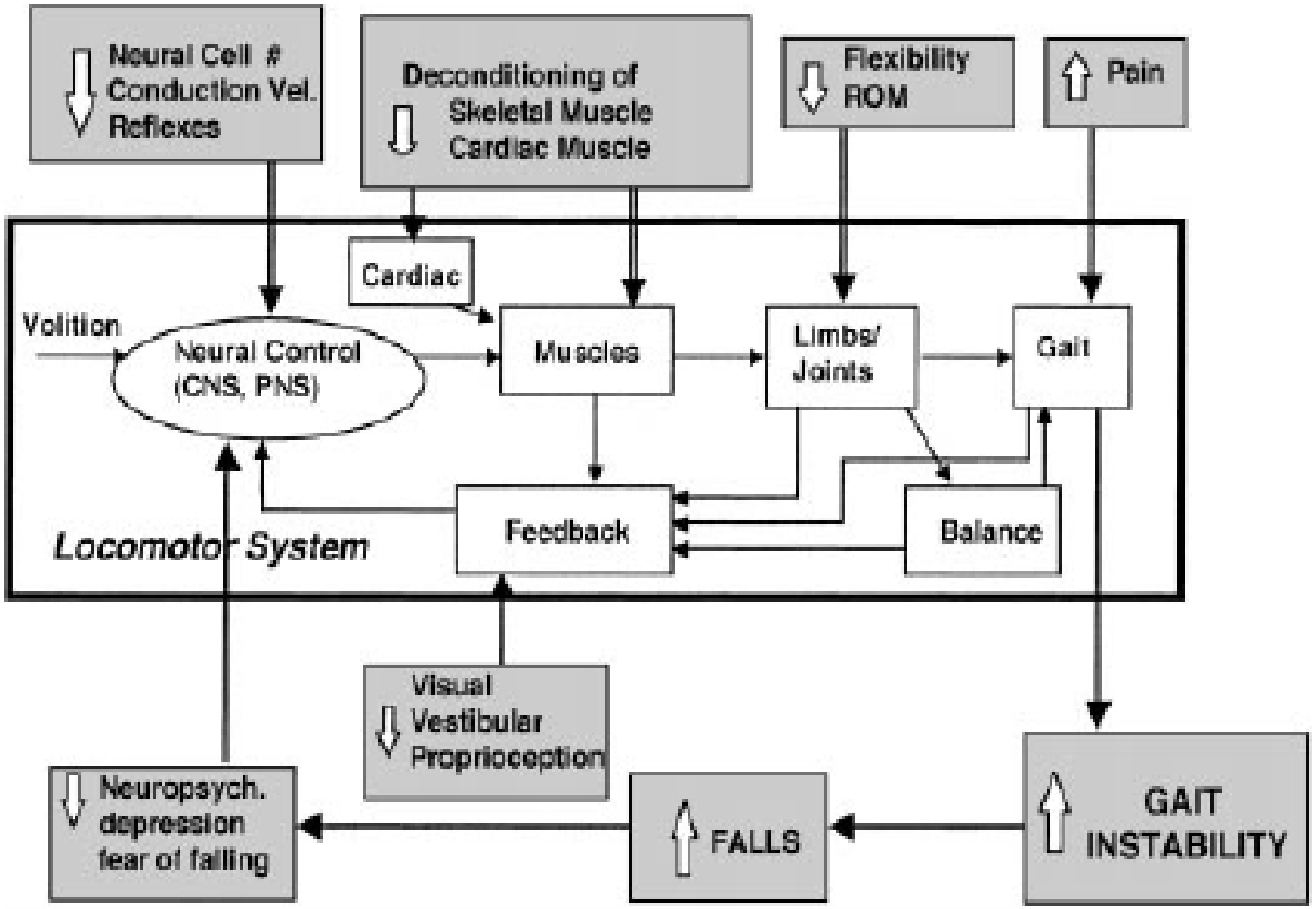
UEA
Universidade do Estado do Amazonas

UnATI
UNIVERSIDADE ABERTA DA TERCEIRA IDADE

Estructura de la presentación

- La declinación motora asociada a la edad
- Test motores o las pruebas de evaluación neuromuscular
- Valoración motora como predictora de eventos en ancianos: revisión de la evidencia
- Velocidad del paso
- Test de la caminata
- Pruebas de fuerza muscular
- Valoración de las extremidades inferiores como predoctoras de discapacidad
- Conclusiones

Declinación motora asociada a caídas e inestabilidad de la marcha en los ancianos



Factores de riesgo para la declinación funcional

- Alteración cognitiva
- Depresión
- Comorbilidad
- Situación funcional de las extremidades inferiores
- Escasos contactos sociales
- Bajos niveles de actividad física
- Mala percepción de la salud
- Alteraciones visuales

Risk factors for functional status decline in community-living elderly people: a systematic review.

Factores de riesgo para caídas

- Caídas previas.
- Uso de sedantes e hipnóticos.
- Polifarmacia.
- Presencia de enfermedad de Parkinson.
- Antecedentes de ECV.
- Padecimiento de Demencia.
- Déficit en funcionalidad de miembros inferiores.
- Uso de ayudas como muletas y bastones.
- Dificultades para levantarse de una silla.
- Deficiencia neurosensorial especialmente alteraciones en vista y oído.
- Mala adaptación del ambiente.

- ¿La VGI es equivalente a la valoracion motora?
- ¿La valoración motora no está implícita en la valoración funcional?
- Si fuese necesaria, ¿que pruebas usar?

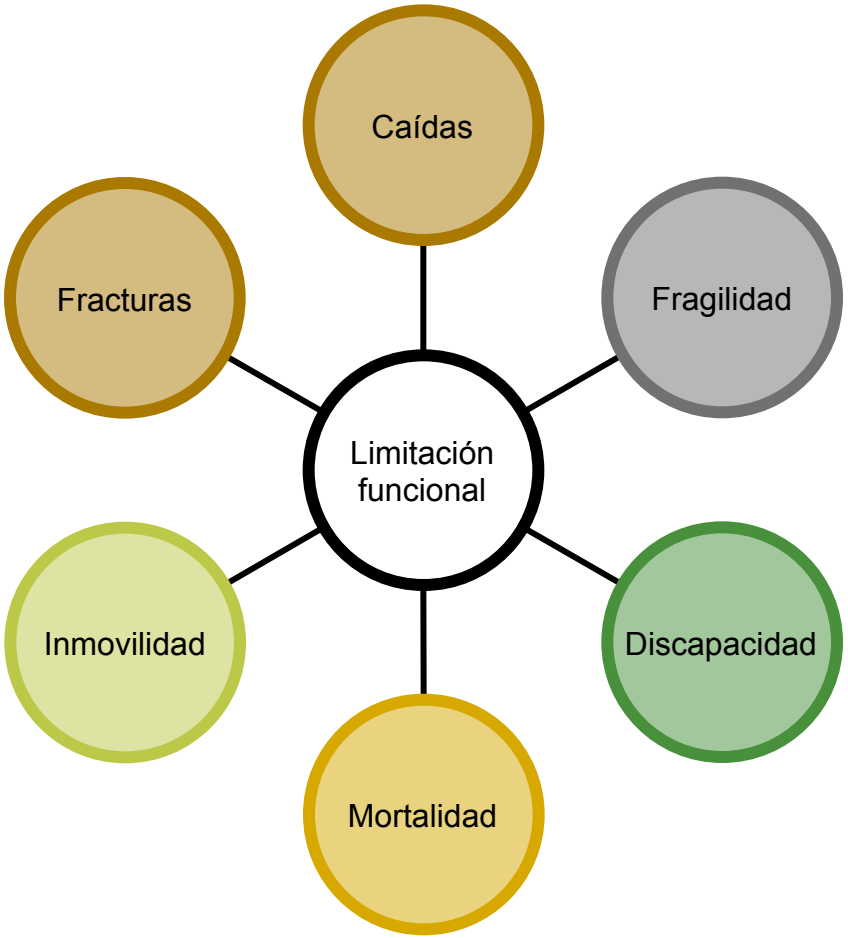






Test propuestos para la función motora y la evaluación neuromuscular

- Up and Go test
- Test de la caminata o velocidad de la marcha
- Chair rise test
- Pruebas del Tandem
- Prueba global de screening
- Medición general del status locomotor
- Predictor de eventos desfavorables
- Fuerza para los movimientos verticales
- Capacidad postural
- Balanceo



Determinants of musculoskeletal frailty and the risk of falls in old age

Runge M. J Musculoskelet Neuronal Interact 2006; 6(2):167-173

Métodos para la evaluación motora y/o neuromuscular

TEST DE EJECUCIÓN

"Physical Performance Measures"

- **Se han definido como una serie de pruebas, en que la persona realiza una serie de actividades, que son evaluadas de forma objetiva y según unos criterios predeterminados (tiempo, repetición).**

- **Los Test de ejecución son una forma objetiva de analizar la función física**
- **No se ven afectados por el entorno**
- **No dependen del estado de ánimo**

Factores de riesgo para discapacidad

Incidencia y FR en AM que viven en la comunidad

Características basales de las 315 personas incluidas en el estudio por edad.

	75-84 a. (N=229)	≥85 años (N=86)	p-valor
IMC	27,7±4,3	26,3±3,8	0,006[c]
PAD	74,7±9,5	72,3±8,1	0,036[c]
Insuficiencia cardiaca crónica	19 (8,3)	18 (20,9)	0,002[a]
Índice de Barthel	95,9±6,5	89,9±11,9	<0,001[b]
Índice de Lawton	4,4±1,1	3,1±1,6	<0,001[b]
Sherbrooke	181 (79,0)	80 (93,0)	0,003[a]
Estado cognitivo (GPCOG)	82 (39,8)	43 (69,4)	<0,001[a]
Agudeza auditiva	56 (24,5)	44 (51,2)	<0,001[a]
Agudeza visual	77 (33,6)	53 (61,6)	<0,001[a]
Guralnik	58 (25,3)	38 (44,2)	0.001[a]
Equilibrio	47 (20,5	36 (41,9)	<0,001[a]
Deambular	48 (21,0)	34 (39,5)	0,001[a]
Levantarse de la silla	60 (26,2)	31 (36,0)	

[a]Chi-cuadrado de Pearson, [b]U de Mann-Whitney, [c]T-student

Proyecto FIS

Factores de riesgo para discapacidad

Incidencia y FR en AM que viven en la comunidad

Incidencia de discapacidad y mortalidad a los 12 meses de la evaluación geriátrica basal.

	% (IC95%)
Discapacidad según índice de Barthel (pérdida de 10 o más puntos)	10,8 (7,3-15,2)
Discapacidad según índice de Lawton (pérdida de 2 o más actividades instrumentales)	16,9 (12,6-22,0)
Discapacidad según índice de Barthel y/o índice de Lawton	23,1 (18,1-28,7)
Mortalidad	5,4 (3,2-8,5)

Factores de riesgo para discapacidad

Incidencia y FR en AM que viven en la comunidad

Grado de asociación entre discapacidad funcional a los 12 meses de la evaluación geriátrica basal y los factores demográficos y clínicos.

Características	OR cruda (IC 95%)	OR ajustada (IC95%)
Sexo	1,34 (0,74-2,45)	0,98 (0,50-1,89)
Edad	1,08 (1,01-1,14)	1,08 (1,01-1,16)
Estado cognitivo (GPCOG)	2,37 (1,29-4,32)	2,71 (1,40-5,23)
Ingresos hospitalarios (últimos 6 meses)	2,92 (1,10-7,78)	2,98 (1,01-8,74)
Barthel basal	0,97 (0,94-1,00)	0,95 (0,91-0,99)
Lawton basal	0,94 (0,74-1,19)	1,46 (1,02-2,08)

Proyecto FIS

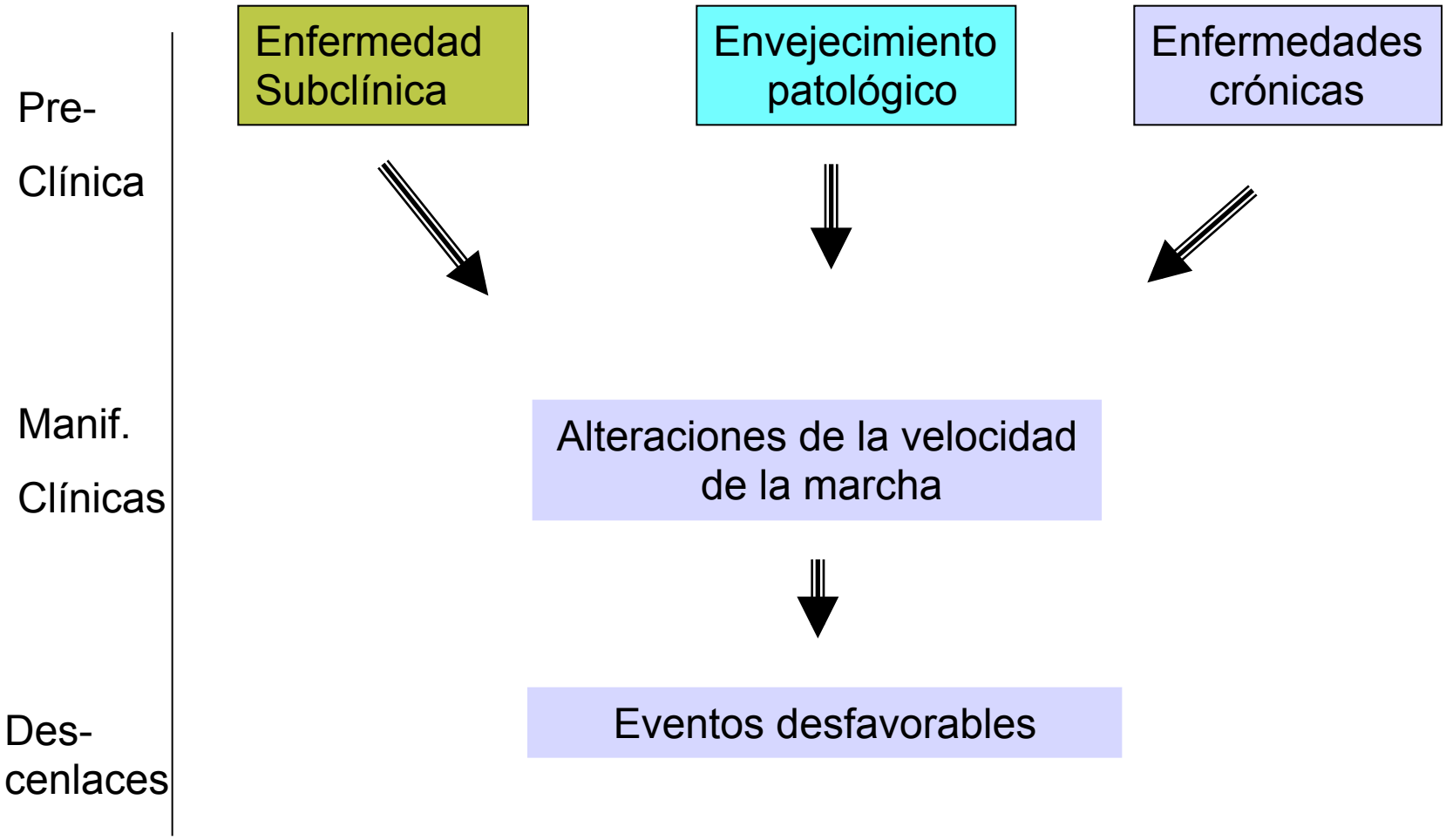
Impacto de la condición geriátrica en la AVD

Table 4. Risk Ratios for Activities of Daily Living Dependency*

Variable	Risk Ratio (95% CI)†			
	Model 1‡	Model 2§	Model 3‖	Model 4¶
Number of geriatric conditions				
1	3.0 (2.6–3.4)	2.6 (2.3–3.0)	2.2 (2.0–2.5)	2.1 (1.9–2.4)
2	7.3 (6.3–8.3)	5.4 (4.7–6.2)	3.9 (3.4–4.4)	3.6 (3.1–4.1)
≥3	16.9 (14.8–18.9)	11.5 (9.9–13.0)	7.5 (6.4–8.5)	6.6 (5.6–7.6)
Number of chronic diseases				
1	–	–	1.9 (1.8–2.1)	–
2	–	–	2.8 (2.6–3.1)	–
≥3	–	–	4.0 (3.5–4.5)	–
Type of chronic disease				
Heart disease	–	–	–	1.2 (1.0–1.3)
Lung disease	–	–	–	1.4 (1.3–1.6)
Diabetes	–	–	–	1.3 (1.2–1.4)
Cancer	–	–	–	1.0 (0.8–1.2)
Musculoskeletal disorder	–	–	–	1.4 (1.3–1.5)
Stroke	–	–	–	3.0 (2.7–3.3)
Psychiatric disorder	–	–	–	1.5 (1.3–1.6)

* ≥1 dependencies for activities of daily living.
† Risk ratios were weighted by using the Health and Retirement Study (HRS) respondent population weights to adjust for the complex sampling design of the HRS.
‡ Unadjusted.
§ Adjusted for 6 demographic characteristics.
‖ Adjusted for 6 demographic characteristics and numbers of chronic diseases.
¶ Adjusted for 6 demographic characteristics and 7 chronic diseases.

Geriatric Conditions and Disability: The Health and Retirement StudyCigolle, C, et al. *Ann Intern Med.* 2007;147:156-164.


Pre-
Clínica
Enfermedad Subclínica
Envejecimiento patológico
Enfermedades crónicas
Manif.
Clínicas
Alteraciones de la velocidad de la marcha
Des-
cenlaces
Eventos desfavorables

EPES Study

Table 1. Presence and Type of Disability at Four Years of Follow-up, According to Scores on Base-Line Measures of Performance.

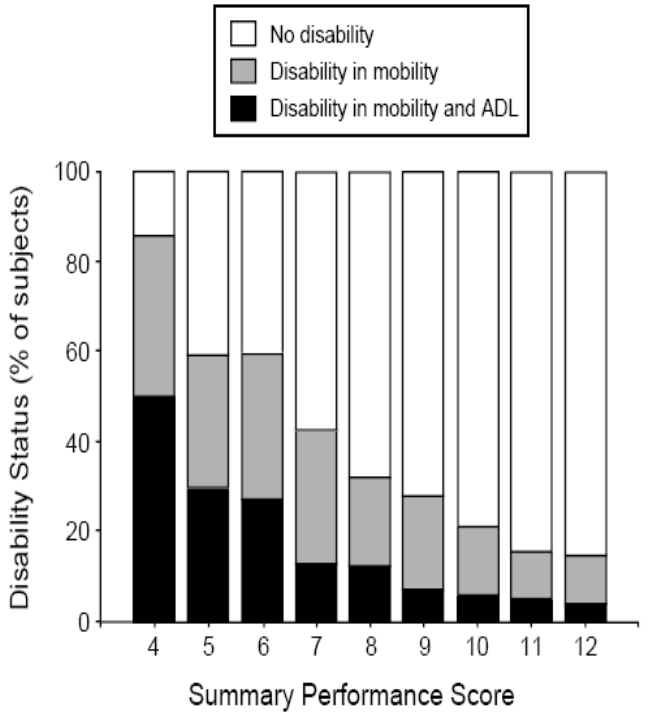
Test and Score*	Status at Four Years		
	No Disability	Mobility-Related Disability	Disability in ADL†
	percent of subjects		
8-ft (2.4-m) walk			
1	35.6	31.1	33.3
2	59.9	24.6	15.5
3	71.8	19.9	8.3
4	80.4	13.5	6.2
Repeated rising from a chair			
1	59.7	25.3	15.1
2	67.0	21.9	11.1
3	74.9	16.4	8.7
4	79.3	13.9	6.8
Standing balance			
1	37.7	31.2	31.2
2	53.4	30.5	16.0
3	67.8	20.9	11.3
4	77.7	15.4	6.9

*Scores ranged from 1 to 4, with 1 indicating the poorest performance, and 4 the best performance. $P<0.001$ for the association between the scores on each performance measure and subsequent disability status, by the chi-square test.

†ADL denotes activities of daily living.

Table 2. Adjusted Relative Risk of Disability at Four Years of Follow-up, According to the Summary Performance Score at Base Line.*

Summary Performance Score	No. of Subjects†	Disability in ADL		Mobility-Related Disability	
		No. with Disability	RR (95% CI)	No. with Disability‡	RR (95% CI)
4–6	112	32	4.2 (2.3–7.7)	70	4.9 (3.1–7.8)
7–9	487	50	1.6 (1.0–2.6)	159	1.8 (1.3–2.5)
10–12	522	29	1.0	94	1.0



Lower-extremity function in persons over the age of 70 years as a predictor Of subsequent disability

Guralnik J, et al Engl J Med 1995;332:556-

Predicción de eventos

Metodos combinados

Estudio en la comunidad

Seguimiento a 1 año

Alteraciones del Test de Guralnik se asocian a

- Mayor hospitalización
- Baja autopercepción de salud
- Deterioro funcional

Table 4. Gait Speed and Established Population for Epidemiologic Studies of the Elderly Performance Battery as Predictors of Hospitalization, Sites Combined, Adjusted for Pra Alone and then Pra and Physician Estimate

	Risk Adjusted for Pra n = 408		Risk Adjusted for Pra and Physician's Estimate n = 328	
Variable	Odds Ratio	*P*-Value	Odds ratio	*P*-Value
Gait speed (unit = 0.2 m/sec)	0.62	.002	0.6	.16
Hospitalization risk by Pra (unit = 0.2)	1.9	.03	1.8	.046
Physician risk estimate (unit = 10%)			1.2	.033
EPESE (unit = 2 points)	0.68	.0004	0.79	.05
Hospitalization risk by Pra (unit = 0.2)	1.9	.002	1.6	.07
Physician risk estimate (unit = 10%)			1.14	.05

Physical Performance Measures in the Clinical Setting Studenski S, et alJ Am Geriatr Soc 51:314–322, 2003.

Test de los 6 minutos de caminata

Table 5—*Linear Regression Models Predicting 6MWD for Women (n = 1,094), With Same Variables in Model for Men and Women***

Blocks	Original Model			Function Variables Added		
	Coefficient (SE)	95% CI	p Value	Coefficient (SE)	95% CI	p Value
Demographics						
Age at year 9 visit, yr	− 4.4 (0.58)	− 5.5 to − 3.3	< 0.001	− 3.4 (0.59)	− 4.6 to − 2.3	< 0.001
Black race	− 14.6 (7.1)	− 28.5 to − 0.66	0.040	− 11.4 (7.2)	− 25.6 to 2.8	0.115
Education less than high school	− 6.2 (5.6)	− 17.1 to 4.8	0.269	5.1 (5.8)	− 6.3 to 16.5	0.381
Clinic			< 0.001			< 0.001
Wake Forest	Referent			Referent		
University of California, Davis	0.05 (6.6)	− 12.8 to 12.9		− 6.1 (6.5)	− 18.9 to 6.7	
Hagerstown	− 15.7 (7.1)	− 29.5 to − 1.9		− 25.2 (7.1)	− 39.0 to − 11.4	
Pittsburgh	− 35.4 (6.6)	− 48.3 to − 22.5		− 41.3 (6.5)	− 54.1 to − 28.5	
Anthropometry						
Waist circumference, cm	− 1.50 (0.28)	− 2.06 to − 0.95	< 0.001	− 1.23 (0.28)	− 1.79 to − 0.68	< 0.001
Weight (centered), lb	0.36 (0.15)	0.07 to 0.66	0.016	0.16 (0.15)	− 0.15 to 0.46	0.313
Weight squared (centered), lb	− 0.006 (0.001)	− 0.009 to − 0.003	< 0.001	− 0.007 (0.002)	− 0.010 to − 0.003	< 0.001
Clinical						
AAI			0.006			0.006
≤ 1.1	78.6 (25.3)	28.9 to 128.3		78.4 (24.6)	30.1 to 126.8	
> 1.1	− 5.93 (30.0)	− 64.8 to 52.9	0.002	− 13.3 (29.6)	− 71.3 to 44.8	< 0.001
Diastolic BP, mm Hg						
< 69		− 0.41 to 0.91		0.23 (0.33)	− 0.41 to 0.87	
> 69	0.25 (0.34)	− 2.2 to − 0.62	< 0.001	− 1.4 (0.39)	− 2.2 to − 0.67	< 0.001
FEV_1, L	− 1.4 (0.40)	25.9 to 49.8	< 0.001	35.9 (6.0)	24.1 to 47.7	0.001
Arthritis	37.8 (6.1)	− 31.5 to − 12.4	0.008	− 17.0 (4.9)	− 26.6 to − 7.4	0.021
Stroke or TIA prevalence	− 21.9 (4.9)	− 46.8 to − 7.0	0.002	− 22.9 (9.9)	− 42.3 to − 3.5	0.002
ln (C-reactive protein)	− 26.9 (10.1)	− 12.4 to − 2.8		− 7.4 (2.4)	− 12.2 to − 2.6	
	− 7.6 (2.5)					
Medications						
ACE inhibitors (any reason)	− 29.4 (7.1)	− 43.4 to − 15.5	< 0.001	− 27.1 (6.9)	− 40.7 to − 13.6	< 0.001
Digitalis	− 10.0 (9.1)	− 27.9 to 7.8	0.270	− 9.2 (9.0)	− 26.9 to 8.4	0.305
Lipid lowering	4.5 (6.8)	− 8.9 to 17.9	0.513	3.6 (6.7)	− 9.4 to 16.7	0.586
Function						
MMSE score						< 0.001
≤ 95				0.89 (0.44)	0.02 to 1.76	
> 95				5.6 (1.4)	2.9 to 8.4	
Grip strength				1.7 (0.45)	0.78 to 2.54	< 0.001
Depression score				− 1.4 (0.49)	− 2.3 to − 0.41	0.005

* See Table 4 for expansion of abbreviation.

The 6 MWT: a measure of Functional Status in the elderly adults

Enright P *Chest* 2003;123;387-398

Factores de riesgo asociados a declinación catastrófica en la movilidad

Table 2. Odds ratios and 95% confidence intervals (CIs) for catastrophic decline in mobility by summary variables of major domains

	Odds ratios (95% CI)	
	Unadjusted	Adjusted
Socio-demographic factors		
Age >70	4.0 (1.2–12.9)	3.7 (1.1–11.8)
Health conditions		
Hearing problems	3.0 (1.1–8.0)	2.8 (1.1–7.3)
Self-report of health deterioration	3.4 (1.2–9.2)	4.3 (1.2–14.7)
Functional reserve capacity	5.8 (2.2–15.5)	6.8 (2.2–20.8)
Psychological factors	4.7 (1.6–13.6)	6.5 (1.9–22.3)
Physical environment	1.2 (0.4–4.0)	1.4 (0.5–4.4)
Social support	2.5 (0.9–6.8)	1.3 (0.4–4.2)
Social engagement	3.1 (1.3–5.3)	2.9 (1.2–7.1)

Odds ratios adjusted for socio-demographic factors and health conditions.

Predicting catastrophic decline in mobility among older people
Ayis, et al, *Age and Ageing* 2006; **35:** 382–387

Velocidad de la marcha y fuerza de las ex. inferiores como predictores de eventos

	Variable	OR (95% CI)	*P* Value
Dependency	Age group (80+)	2.199 (1.34-3.60)	.002
	Sex (female)	1.310 (0.86-1.99)	.207
	Age groups·Sex	0.426 (0.23-0.80)	.009
	Speed	1.094 (1.05-1.14)	<.001
	Stride length	0.153 (0.07-0.33)	<.001
	ROC = 0.798		
Mortality	Age group (80+)	2.152 (1.66-2.78)	<.001
	Sex (female)	0.505 (0.39-0.65)	<.001
	Speed	1.023 (1.01-1.04)	.006
	Stride length	0.353 (0.22-0.57)	<.001
	ROC = 0.7065		
Institutionalization	Age group (80+)	1.796 (0.88-3.68)	.110
	Sex (female)	1.364 (0.67-2.77)	.391
	Stride length	0.095 (0.03-0.30)	<.001
	ROC = 0.764		

Walking Speed and Stride Length Predicts 36 Months Dependency, Mortality, and Institutionalization in Chinese Aged 70 And Older

Woo et al JAGS, Volume 47, Issue 10

Velocidad de la marcha como predictora de eventos desfavorables

Table 1. Baseline Characteristics ($N = 102$)

Characteristics	Gait Velocity >1.1 m/s ($N = 34$)	0.7–1.0 m/s ($N = 42$)	<0.7 m/s ($N = 26$)
Demographic and medical			
Age, mean ± *SD*	78.9 (3)	80.3 (4.3)	79.5 (4)
Sex (female/male), *n*	17/17*	31/11*	25/1*
Body mass index, mean ± *SD*	26.7 (3.9)	26.5 (4.4)	26.0 (5.2)
No. of comorbidities, mean	3.3	4.3	4.2
HTN, % (*n*)	55% (19)	54% (23)	65% (17)
DBT, % (*n*)	5% (2)	4% (2)	15% (4)
AMI, % (*n*)	9% (3)	9% (4)	4% (1)
CANCER, % (*n*)	0	9% (4)	7% (2)
OA, % (*n*)	32% (11)	35% (15)	42% (11)
Functional and mobility			
Previous fall, % (*n*)	14% (5)*	19% (8)*	50% (13)*
Abn. POMA, % (*n*)	12% (4)*	29% (12)	50% (13)*
Abn. Get Up & Go, % (*n*)	24% (8)*	55% (23)	67% (16)*
MMSE score, mean [a]	27.7	27.7	27.4
GDS score, mean (±*SD*)[b]	2.7 (±2)	2.8 (±1)	3.7 (±3)

Table 2. Univariate Analysis of 2-Year Follow-Up Characteristics ($N = 101$)

Gait Velocity	>1.1 m/s ($N = 34$)	0.7–1.0 m/s ($N = 42$)	<0.7 m/s ($N = 25$)	RR (95% CI)	*p* Value
Subjects with any adverse events, % (*n*)	20% (7)*	34% (14)†	72% (18)*,†	3.5 (1.7–7.0)* 2.1 (1.3–3.4)†	<.002 <.001
New fall, % (*n*)	12% (4)*	24% (10)†	60% (16)*,†	5.4 (2.0–14.3)* 2.6 (1.4–4.9)†	<.0005
Hospitalization, % (*n*)	8.8% (3)*	17% (7)†	52% (13)*,†	5.9 (1.9–18.5)* 3.0 (1.4–3.6)†	<.005
Need for a caregiver, % (*n*)	3% (1)*	17% (7)†	28% (7)*,†	9.5 (1.3–72.5)* 1.64 (0.7–4.1)†	<.007
Nursing home placement, % (*n*)	0	0	12% (3)	N/A	
Fracture, % (*n*)	3% (1)*	10% (4)†	8% (2)*,†	2.7 (0.3–28.4)* 0.8 (0.8–4.2)†	
Death, % (*n*)	0	10% (4)	8% (2)	N/A	

Gait Velocity as a Single Predictor of Adverse Events in Healthy Seniors Aged 75 Years and Older
Montero Odasso et al Journal of Gerontology Medical Science 2005, 60A, 1304–1309

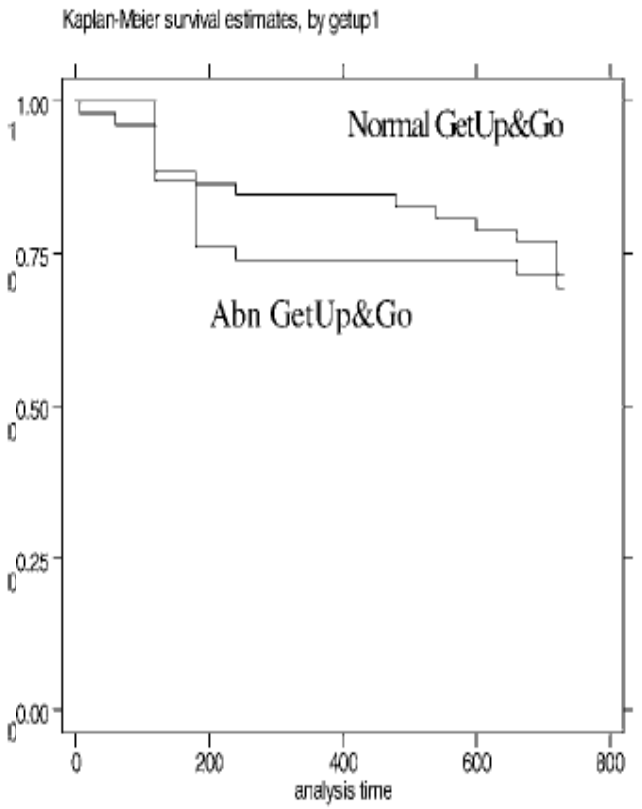
Comparación de VG, upandGo Test y POMA

Table 3. Comparative Predictive Ability of Gait Velocity Versus Get Up & Go Versus POMA After 2 Years of Follow-Up for Each Poor Outcome

Outcome	Low Gait Velocity	abn. POMA	abn. Get Up & Go
Total events	10.1 (2.2–46)*	2 (0.6–6.4)	0.7 (0.3–2)
New falls	10.9 (2.0–58)*	1.4 (0.4–5.4)	0.8 (0.3–2.4)
Hospitalization	12.3 (1.9–79)*	1.1 (0.3–4.2)	0.7 (0.2–2.4)
Fracture	2.4 (0.2–33)	2.4 (0.4–16.4)	2.3 (0.3–16.4)
Death	1.8 (0.3–4)	1 (0.1–10.5)	0.2 (0.01–2.6)

Notes: Low gait velocity: <0.7 m/s, abn. POMA (abnormal Performed Oriented Mobility Assessment; score <20/28), abnormal Get Up & Go (score <4/5 or >10 s). Data were adjusted for demographics and functioning variables and are shown as odds ratios (95% confidence intervals) from a multiple logistic regression analysis.

*Statistically significant.



GetUp&Go, *p* (long rank test) = .8661

Gait Velocity as a Single Predictor of Adverse Events in Healthy Seniors Aged 75 Years and Older
Montero Odasso et al Journal of Gerontology Medical Science 2005, 60A, 1304–1309

Relación entre velocidad del paso y caídas de causa NCV.

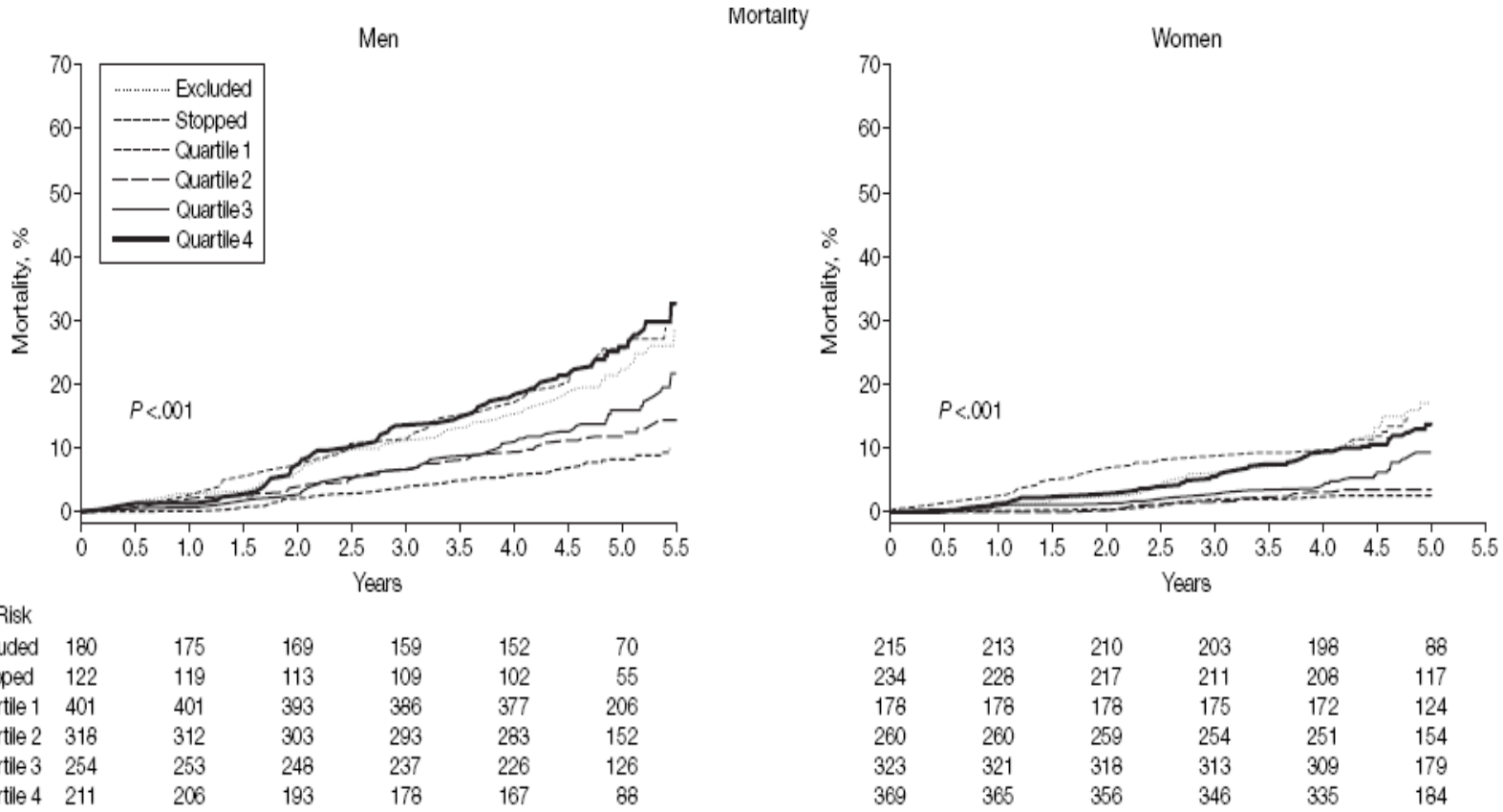
Table 2: Diagnostic accuracy of gait disorder and intrinsic-extrinsic classification for detecting non-cardiovascular mediated falls (n = 41)

Diagnostic Approach	Patients with Non-CV Causes*	Patients with CV Causes†	Sensitivity (%)	Specificity (%)	*p*-value Fisher exact test
Gait Disorder +	34	1	97.1	83	<0.001‡
Gait Disorder -	1	5			
Extrinsic Fall	10	1	28	83	0.9128‡
Intrinsic Fall	25	5			

*Non-CV cause: non-cardiovascular neurally mediated cause. †CV causes: cardiovascular neurally mediated cause. Gait Disorder +: presence of gait disorder. Gait Disorder -: absence of gait disorder. ‡p-value of the associations with non-cardiovascular mediated falls for each diagnostic approach. Note: Neurally mediated cardiovascular causes are the following: orthostatic hypotension, postprandial hypotension, vasovagal syncope and carotid sinus hypersensitivity.

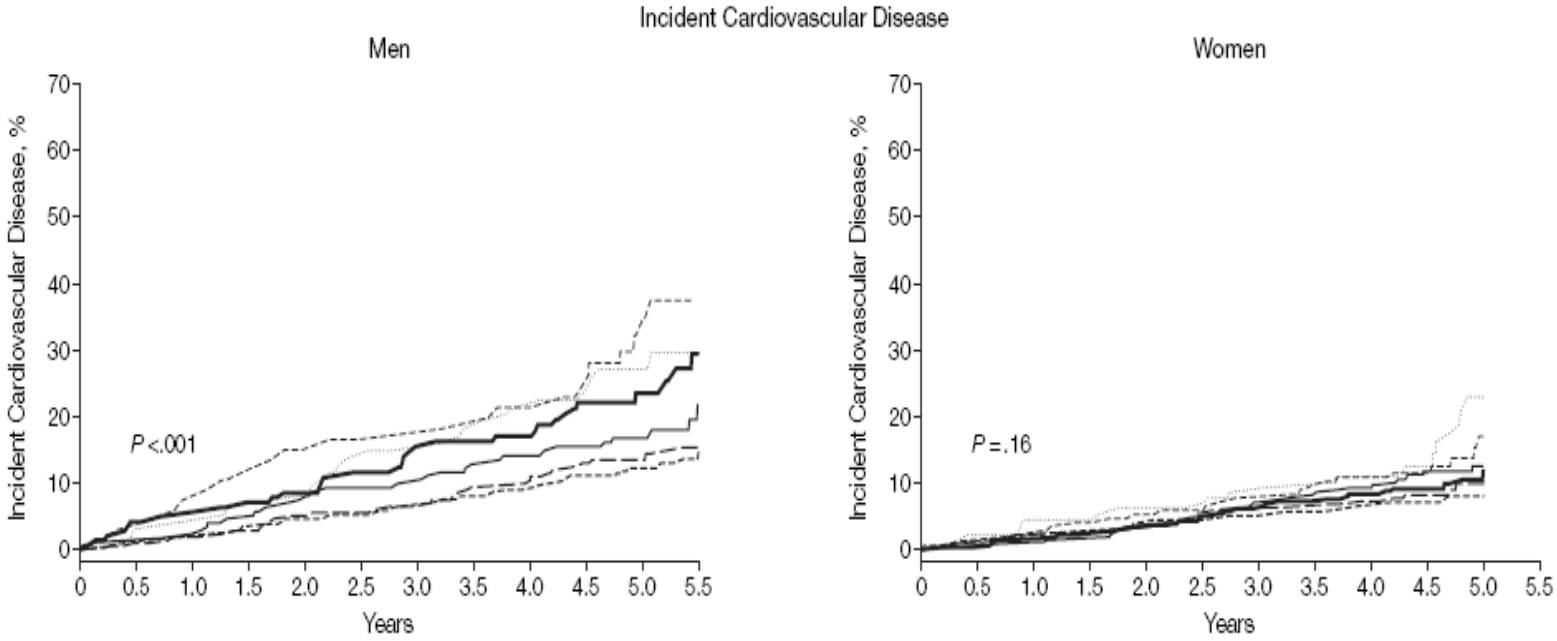
Gait disorders are associated with non-cardiovascular falls in elderly people: a preliminary study
Manuel Montero-Odasso, *BMC Geriatrics* 2005, **5**:15

Mortalidad según caminata de 400 mts



Association of Long-Distance Corridor Walk Performance With Mortality, Cardiovascular Disease, Mobility Limitation, and Disability
Newman A et al. *JAMA. 2006;295:2018-2026*

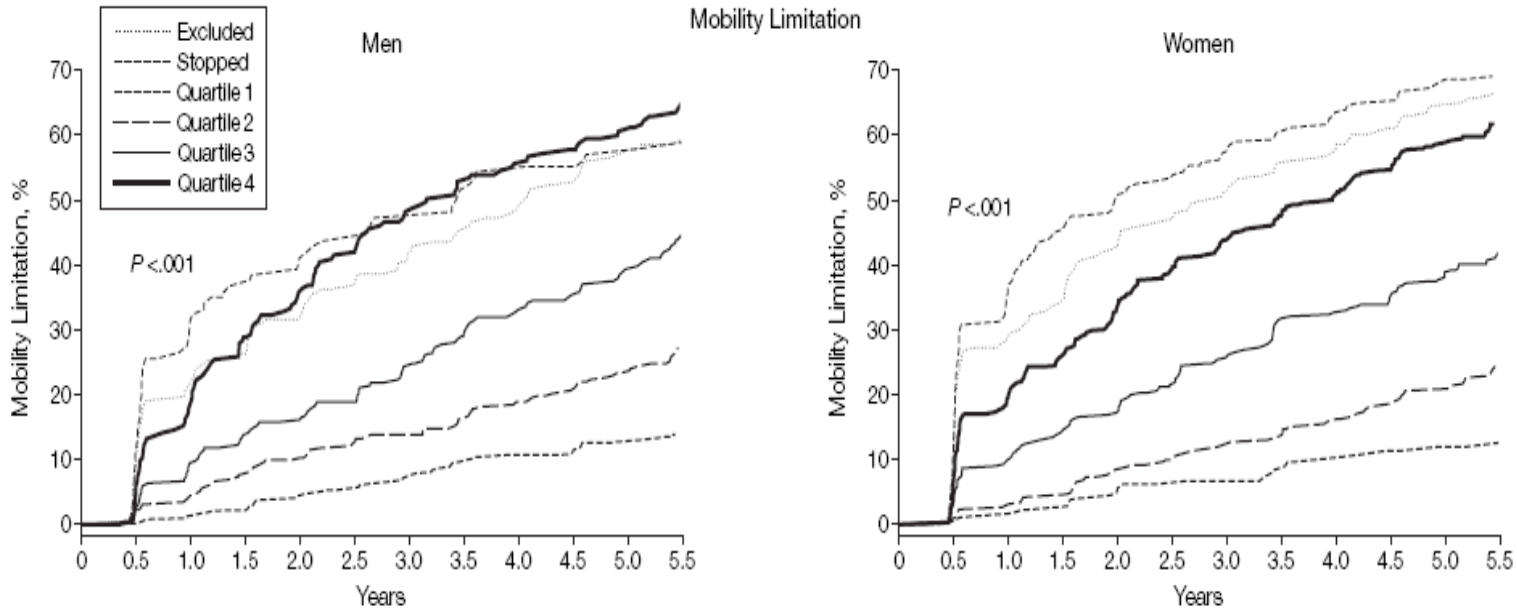
Incidencia de enfermedad cardiovascular



No. at Risk												
Excluded	96	91	88	78	72	31	132	125	120	116	113	49
Stopped	67	62	55	52	49	26	172	165	158	150	144	82
Quartile 1	304	298	285	275	263	136	155	152	151	146	141	104
Quartile 2	219	212	202	194	182	97	223	218	216	206	202	125
Quartile 3	174	170	159	148	137	72	269	267	259	250	242	137
Quartile 4	142	132	123	109	102	48	281	275	268	255	246	139

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Pérdida de la movilidad

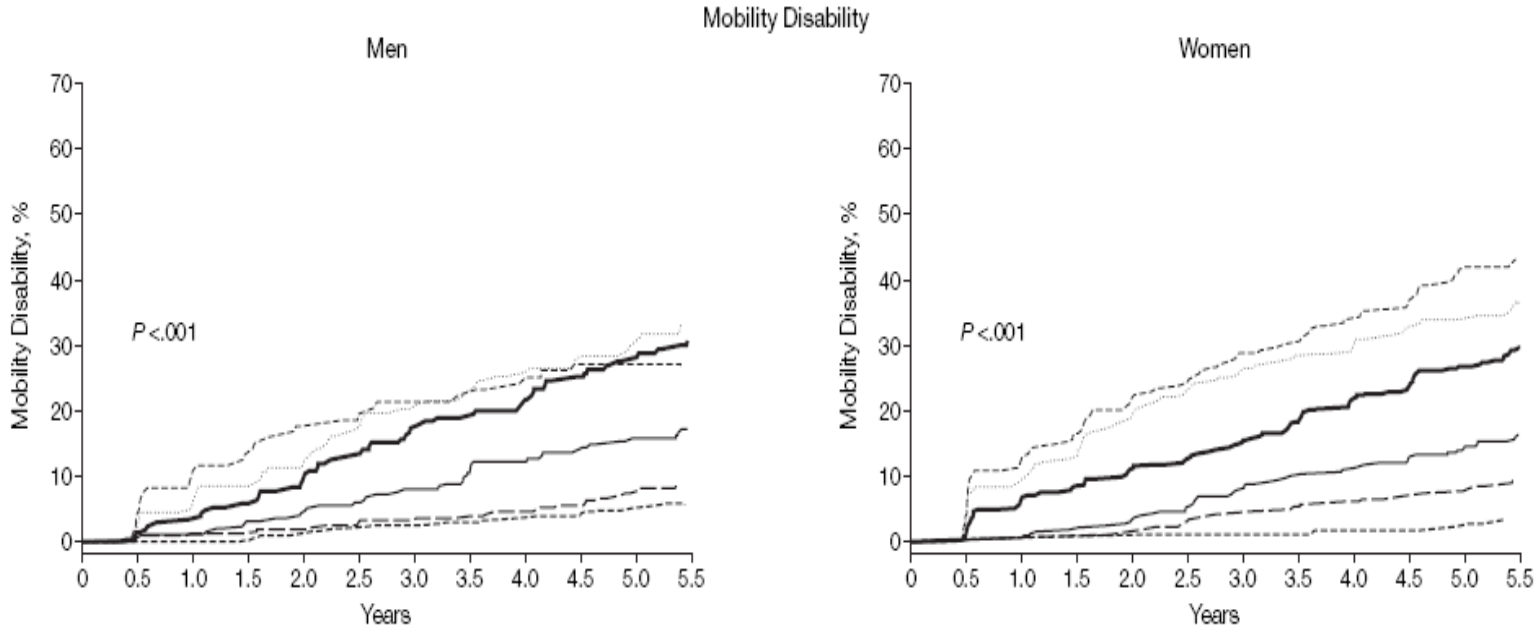


No. at Risk						
Excluded	180	138	117	96	82	68
Stopped	122	81	67	60	52	46
Quartile 1	398	393	378	362	345	333
Quartile 2	318	300	277	262	239	219
Quartile 3	255	230	210	183	157	137
Quartile 4	207	168	127	99	82	69

213	152	121	102	88	68
233	145	109	94	80	69
178	176	168	164	156	152
261	253	238	225	214	201
322	288	264	234	212	188
368	292	239	200	171	137

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Discapacidad



No. at Risk												
Excluded	180	164	150	131	118	104	233	198	171	155	142	121
Stopped	122	106	93	87	79	67	213	191	171	151	143	124
Quartile 1	400	400	390	380	369	355	178	177	177	173	170	168
Quartile 2	318	310	300	289	274	256	261	260	256	246	239	232
Quartile 3	254	250	238	222	203	185	321	317	307	290	278	258
Quartile 4	209	199	175	152	138	118	367	340	319	299	270	243

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Fuerza muscular y mortalidad

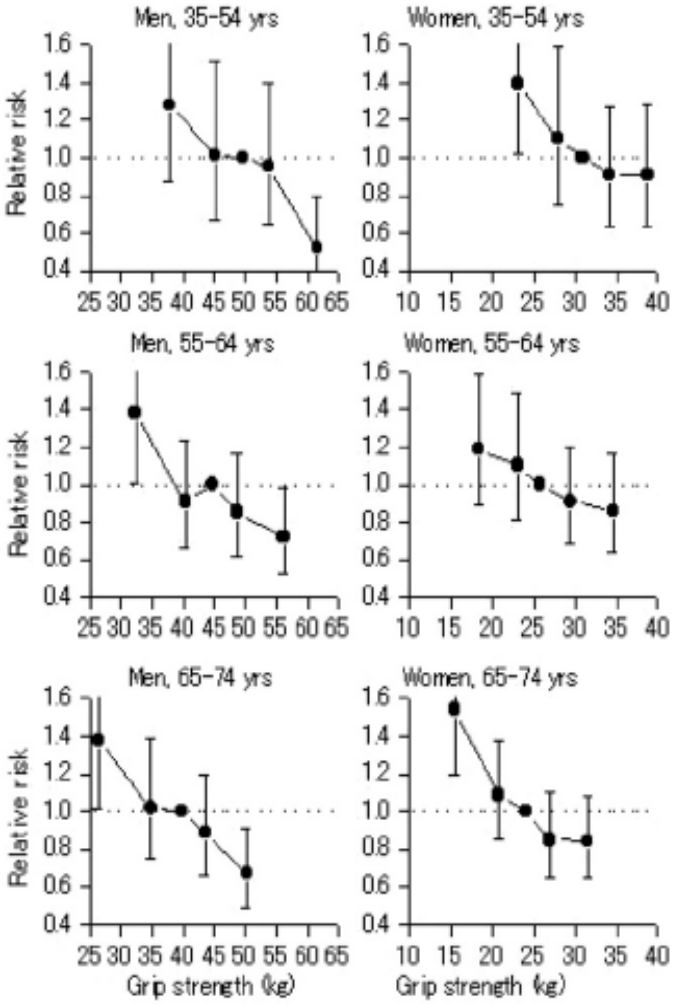


Table 3 Relative Risk (RR) of Death for Each 5-kg Increment of Grip in Men

	Age-adjusted RR		Multivariate-adjusted RR	
All death except external causes	0.89	(0.86-0.93)	0.89	(0.86-0.92)
Cancer	0.95	(0.90-1.01)	0.94	(0.88-1.00)
Heart	0.86	(0.79-0.94)	0.85	(0.79-0.93)
CHD	0.85	(0.75-0.96)	0.83	(0.74-0.94)
Stroke	0.92	(0.84-1.00)	0.90	(0.83-0.99)
CI	0.90	(0.79-1.03)	0.90	(0.79-0.96)
CH	0.86	(0.73-1.03)	0.85	(0.72-1.01)
Pneumonia	0.83	(0.73-0.94)	0.85	(0.75-0.98)

RR was adjusted for age, systolic blood pressure, body mass index, total cholesterol, smoking habits, alcohol consumption, and radiation dose. Figures in parentheses are 95% confidence intervals (CI). CHD = coronary heart disease; CI = cerebral infarction; CH = cerebral hemorrhage.

Grip Strength Predicts Cause-Specific Mortality in Middle-Aged and Elderly Persons

Sasaki, et al. The American Journal of Medicine (2007) 120, 337-342

Conclusiones

- La VGI no es equivalente a la valoración motora.
- La valoración de dominios en la Valoración funcional involucran la medición de pruebas motoras
- Existe buena evidencia de la utilidad de la pruebas motoras para la predicción de eventos desfavorables en los AM



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