

**A Frailty Instrument for primary care:  
findings from the Survey of Health, Ageing  
and Retirement in Europe (SHARE)**

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*FLARE Summer School 2012*

# Frailty: the concept

- *'A condition or syndrome which results from a multi-system reduction in reserve capacity to the extent that a number of physiological systems are close to, or past, the threshold of symptomatic clinical failure.'*
- *As a consequence the frail person is at increased risk of disability and death from minor external stresses'.*

*Age and Ageing* 1997; 26: 315–318

**FOR DEBATE**

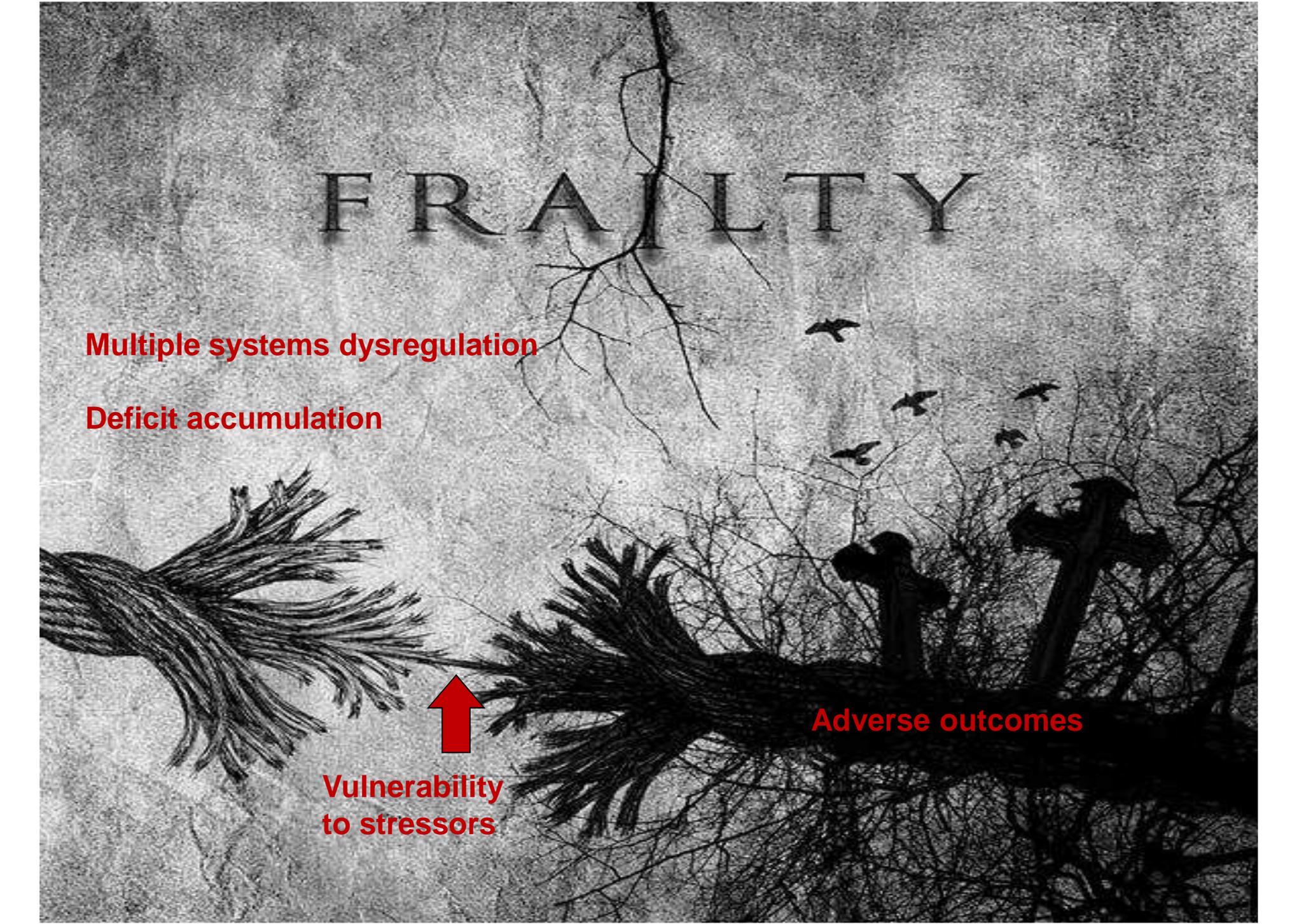
## **Unstable disability and the fluctuations of frailty**

A. JOHN CAMPBELL, DAVID M. BUCHNER<sup>1</sup>

Department of Medicine, University of Otago Medical School, PO Box 913, Dunedin, New Zealand

<sup>1</sup>Department of Health Services, University of Washington, Seattle, WA, USA

# FRAILTY



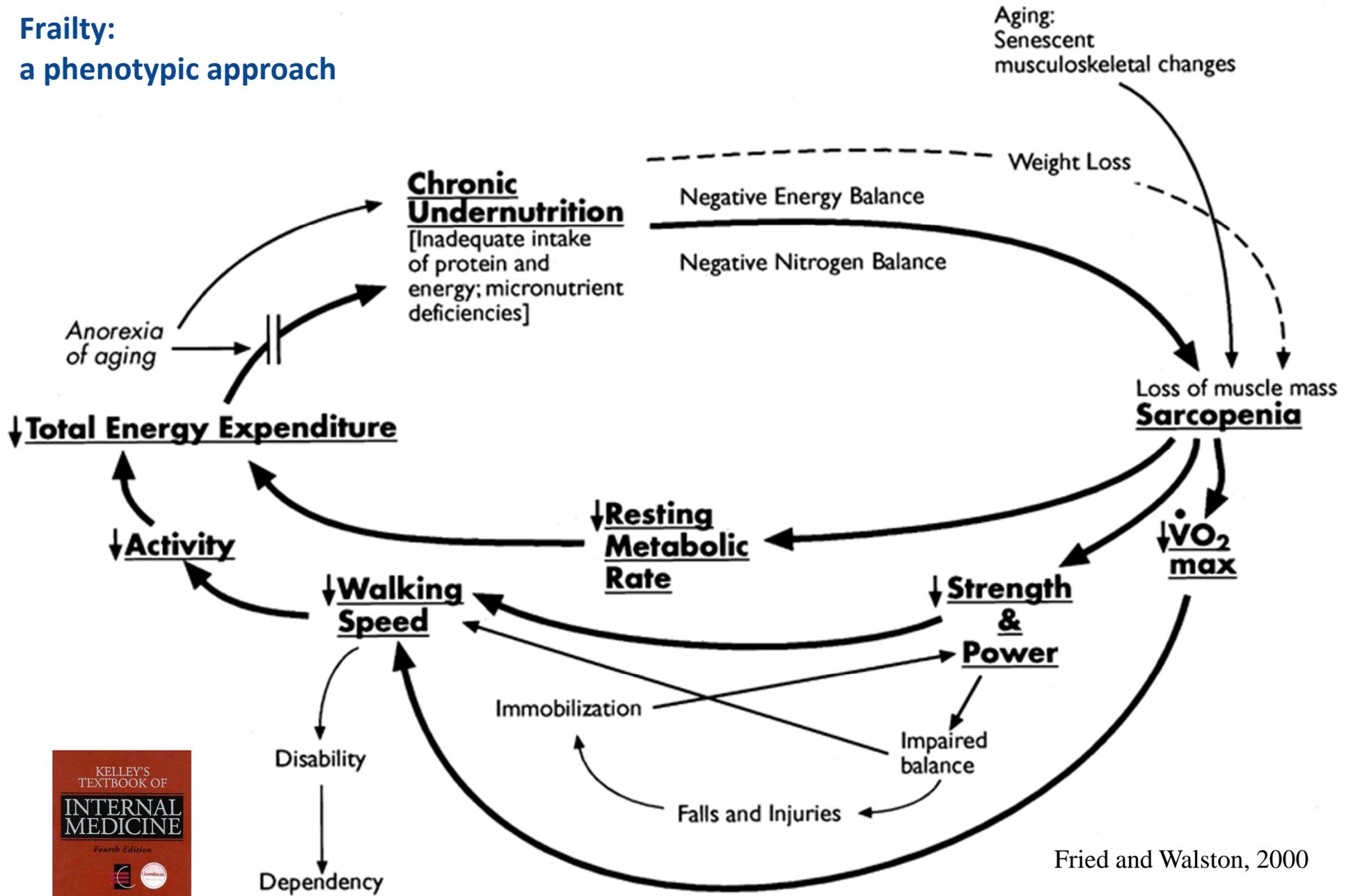
**Multiple systems dysregulation**

**Deficit accumulation**

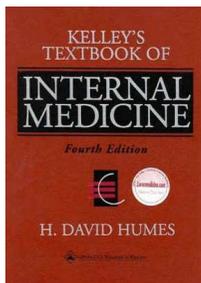
**Vulnerability  
to stressors**

**Adverse outcomes**

**Frailty:  
a phenotypic approach**



Fried and Walston, 2000



Underlying  
Alterations

Clinical  
Syndrome  
of Frailty

Adverse  
Outcomes  
of Frailty

Phenotype

Disease  
(Pathophysiology)



Decline in  
Physiologic  
Function  
And Reserve



Symptoms

- Weight loss
- Weakness
- Fatigue
- Anorexia; decreased food intake
- Inactivity

Signs

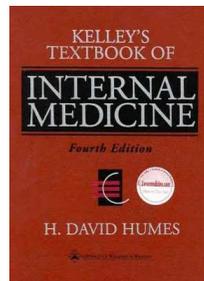
- Sarcopenia
- Osteopenia
- Balance and gait abnormalities
- Deconditioning
- Undernutrition
- Slow gait speed

Risk

- Decreased resiliency / ability to respond to stressors



- Falls
- Injuries
- Acute illnesses
- Hospitalizations
- Disability
- Dependency
- Institutionalization
- Death



Fried and Walston, 2000

# Age vs. Frailty

- Frailty more closely relates to the *biological* than to the *chronological* age of individuals.

**BMC Geriatrics**



Research article

## **Frailty, fitness and late-life mortality in relation to chronological and biological age**

Arnold B Mitnitski<sup>1</sup>, Janice E Graham<sup>2</sup>, Alexander J Mogilner<sup>3</sup> and Kenneth Rockwood\*<sup>4</sup>

Journal of Gerontology: MEDICAL SCIENCES  
2004, Vol. 59A, No. 9, 962-965

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Rapid Communication

## Old or Frail: What Tells Us More?

Hanneke Schuurmans,<sup>1,2</sup> Nardi Steverink,<sup>1,2</sup> Siegwart Lindenberg,<sup>2</sup>  
Nynke Frieswijk,<sup>3</sup> and Joris P. J. Slaets<sup>1,2</sup>

**The New York Times**  
nytimes.com

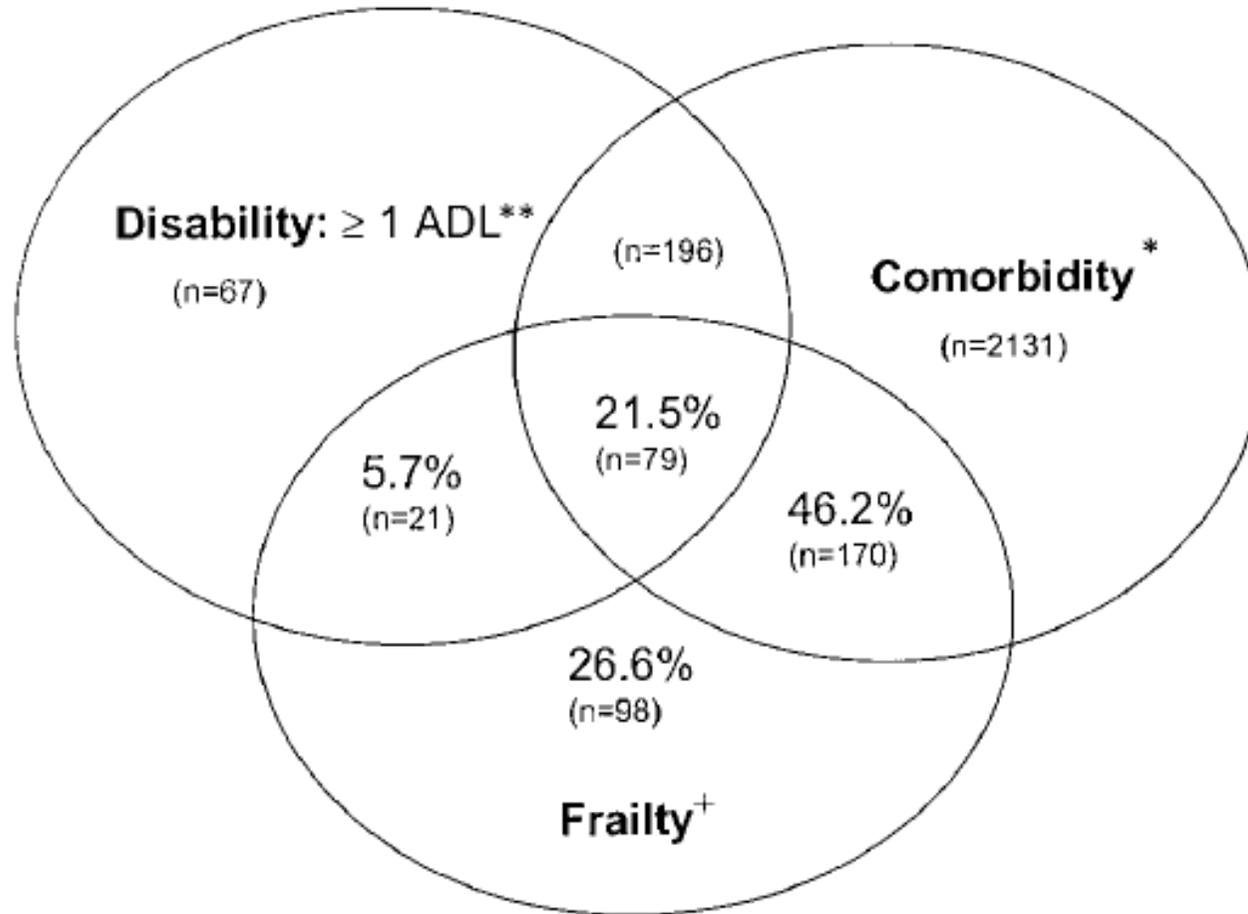
October 5, 2006

THE NEW AGE

## **Old but Not Frail: A Matter of Heart and Head**

By [GINA KOLATA](#)

# Frailty vs. comorbidities, disability



Journal of Gerontology: MEDICAL SCIENCES  
2001, Vol. 56A, No. 3, M146-M156

Copyright 2001 by The Gerontological Society of America

## Frailty in Older Adults: Evidence for a Phenotype

Linda P. Fried,<sup>1</sup> Catherine M. Tangen,<sup>2</sup> Jeremy Walston,<sup>1</sup> Anne B. Newman,<sup>3</sup> Calvin Hirsch,<sup>4</sup>  
John Gottdiener,<sup>5</sup> Teresa Seeman,<sup>6</sup> Russell Tracy,<sup>7</sup> Willem J. Kop,<sup>8</sup> Gregory Burke,<sup>9</sup>  
and Mary Ann McBurnie<sup>2</sup> for the Cardiovascular Health Study  
Collaborative Research Group

# The *gendered* dimension of frailty

JOURNAL OF WOMEN'S HEALTH  
Volume 18, Number 10, 2009  
© Mary Ann Liebert, Inc.  
DOI: 10.1089/jwh.2008.1083

**Original Article**

## Sex Differences in Mortality among Older Frail Mexican Americans

Ivonne-Marie Berges, Ph.D.,<sup>1,2</sup> James E. Graham, Ph.D., D.C.,<sup>1</sup> Glenn V. Ostir, Ph.D.,<sup>1,2,3</sup>  
Kyriakos S. Markides, Ph.D.,<sup>2,4</sup> and Kenneth J. Ottenbacher, Ph.D., O.T.R.<sup>1,2</sup>

**Conclusions:** Frailty is an independent predictor of mortality among older men and women of Mexican American origin. This association was found to be stronger among men after adjusting for age, marital status, education, body mass index (BMI), health behaviors, and medical conditions.

J Am Geriatr Soc. 2008 Dec;56(12):2370-1.

**Sex differences in the prevalence of frailty in a population aged 75 and older in Spain.**

Fernandez-Bolaños M, Otero A, Zunzunegui MV, Beland F, Alarcón T, de Hoyos C, Castell MV.

## Frailty in Older Adults: Evidence for a Phenotype

Linda P. Fried,<sup>1</sup> Catherine M. Tangen,<sup>2</sup> Jeremy Walston,<sup>1</sup> Anne B. Newman,<sup>3</sup> Calvin Hirsch,<sup>4</sup>  
John Gottdiener,<sup>5</sup> Teresa Seeman,<sup>6</sup> Russell Tracy,<sup>7</sup> Willem J. Kop,<sup>8</sup> Gregory Burke,<sup>9</sup>  
and Mary Ann McBurnie<sup>2</sup> for the Cardiovascular Health Study  
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### Table 1. Operationalizing a Phenotype of Frailty

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A. <i>Characteristics of Frailty</i>	B. <i>Cardiovascular Health Study Measure*</i>
Shrinking: Weight loss (unintentional) Sarcopenia (loss of muscle mass)	Baseline: >10 lbs lost unintentionally in prior year
Weakness	Grip strength: lowest 20% (by gender, body mass index)
Poor endurance; Exhaustion	"Exhaustion" (self-report)
Slowness	Walking time/15 feet: slowest 20% (by gender, height)
Low activity	Kcals/week: lowest 20% males: <383 Kcals/week females: <270 Kcals/week
	C. <i>Presence of Frailty</i>
	Positive for frailty phenotype: $\geq 3$ criteria present
	Intermediate or prefrail: 1 or 2 criteria present

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# Prevalence of Frailty in Middle-Aged and Older Community-Dwelling Europeans Living in 10 Countries

Brigitte Santos-Eggimann,<sup>1</sup> Patrick Cuénoud,<sup>2</sup> Jacques Spagnoli,<sup>1</sup> and Julien Junod<sup>1</sup>

<sup>1</sup>Department of Community Medicine and Health, Institute of Social and Preventive Medicine, University Hospital Center and University of Lausanne, Switzerland.

<sup>2</sup>Department of Ambulatory Care and Community Medicine, University of Lausanne, Switzerland.

## *Variables Definition*

Frailty and prefrailty were defined on the basis of the five dimensions in a phenotype described by Fried and associates (4). However, operationalization of these dimensions required adaptation to our survey contents.

# Frailty variables (Santos-Eggimann *et al.*)

- Exhaustion: "In the last month, have you had too little energy to do the things you wanted to do?". Yes = 1; No = 0.
- Appetite: "Diminution in desire for food" in response to the question: "What has your appetite been like?" or, in the case of a non-specific or uncodeable response to this question, by responding "Less" to the question: "So, have you been eating more or less than usual?". The presence of the criterion was coded as 1 and its absence as 0.
- Weakness was assessed by handgrip strength (Kg) using a dynamometer. Two consecutive measurements were taken from the left and right hands. The highest of the four was selected. This variable was kept continuous.
- 'Slowness' was defined as a positive answer to either of the following two items: "Because of a health problem, do you have difficulty [expected to last more than 3 months] walking 100 metres?" or "... climbing one flight of stairs without resting?". One or two positive answers received the score of 1, and two negative answers received the score of 0.
- Low activity: "How often do you engage in activities that require a low or moderate level of energy such as gardening, cleaning the car, or doing a walk?". This variable was kept ordinal: 1 = "More than once a week"; 2 = "Once a week"; 3 = "One to three times a month" and 4 = "Hardly ever or never".

# Frailty: an emerging concept for general practice

*Jan De Lepeleire, Steve Iliffe, Eva Mann and Jean Marie Degryse*

**British Journal of General Practice, May 2009**

Some easy instruments are published, although discussion exists about the feasibility for general practice.<sup>50,54</sup> GPs need easy instruments that allow a two-step approach, with a simple heuristic tool (a 'rule of thumb') as the first step, and a more complex assessment as the second.<sup>54</sup> In many European countries, GPs could integrate the first step into their daily work, and delegate the second step to a nurse, practice assistant, and sometimes secondary care. Short instruments exist and some of them have proven their clinical value in a stepwise diagnostic procedure.<sup>23,51,55,56</sup> Enhancement of current clinical skills by adding a more formal assessment of frailty, using either Fried *et al*'s heuristic or a validated tool, could potentially strengthen case-finding strategies for dementia or other chronic diseases in primary care, or guide clinicians in policy choices, especially if burdensome treatment is concerned, such as chemotherapy or radiation therapy in cancer.

*Age and Ageing* 2008; **37**: 484–485

## Letters to the Editor

### Family physicians need easy instruments for frailty

JAN DE LEPELEIRE<sup>1\*</sup>, JAN DEGRYSE<sup>2</sup>, STEVE ILLIFFE<sup>3</sup>, EVA MANN<sup>4</sup>,  
FRANK BUNTINX<sup>1</sup>

# The practical application of Fried's operationalization

- The dichotomisation of criteria that are measured on a continuous scale (i.e. grip strength, walking speed and physical activity) is done retrospectively according to the lowest 20<sup>th</sup> percentile rule, with further stratifications.
- This requires considerable statistical expertise and also a reference sample, both of which are not always available to primary care practitioners.

**RESEARCH ARTICLE**

**Open Access**

# A Frailty Instrument for primary care: findings from the Survey of Health, Ageing and Retirement in Europe (SHARE)

Roman Romero-Ortuno<sup>1,4\*</sup>, Cathal D Walsh<sup>2,4</sup>, Brian A Lawlor<sup>3,4</sup>, Rose Anne Kenny<sup>1,4,5</sup>

# Main study aims

- To assess whether five SHARE variables approaching Fried's frailty phenotype had internal validity *on their own* and could be statistically summarised in a single *factor* with three underlying *latent classes* (i.e. non-frail, pre-frail and frail), with appropriate biopsychosocial correlates and predictive validity.
- To provide European community practitioners with a simple and valid instrument that offers a pre-calculated, population-representative and gender-specific frailty class, once the five measurements are entered.
- The *SHARE Frailty Instrument* (SHARE-FI) is intended to facilitate the rapid assessment of frailty in primary care and enhance the communication between the various agencies managing middle-aged and older people in the community.

# SHARE sample (1)

- 17,304 females and 13,811 males included in the first wave of SHARE, corresponding to nationally representative samples of 12 European countries.

(Austria, Germany, Sweden, Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland, Belgium and Israel).

# SHARE sample (2)

- Wave 1 data were collected between 2004 and 2006. The mean age of the females was 63.6, and that of males was 64.1.
- Complete data for assessing frailty were available for 15,578 females and 12,783 males.

# SHARE sample (3)

- For the prospective validation, we used a subset of Wave 1 subjects (11,384 females and 9,163 males) for whom mortality data at Wave 2 (2006 - 2007) were available.
- The mean follow up period between Wave 1 and Wave 2 was 2.4 years.



**FRAILTY CLASSES:  
CROSS-SECTIONAL CORRELATIONS**

%

Females (N=15,578)

	Non-frail (N=10,420)	Pre-frail (N=4,025)	Frail (N=1,133)	P value	Age- adjusted P value
<b>Frailty phenotype: DFactor model</b>					
Exhaustion: yes (cp)	0.21	0.51	0.81	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Weight loss: yes (cp)	0.03	0.12	0.39	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Handgrip strength: mean (Kg)	29.4	23.7	17.9	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Slowness: yes (cp)	0.02	0.22	0.84	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Low activity: hardly ever, or never (cp)	0.03	0.17	0.54	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
<b>Sociodemographic</b>					
Age: mean (SD)	60.5 (9.4)	66.7 (10.9)	73.3 (11.0)	<0.001 <sup>#</sup>	-
Years of education: mean (SD)	10.3 (4.2)	8.2 (4.4)	6.5 (4.4)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
<b>Physical</b>					
Self-rated health (best:1; worst:5): mean (SD)	2.7 (1.0)	3.5 (0.9)	4.2 (0.8)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. chronic diseases: mean (SD)	1.2 (1.2)	2.1 (1.5)	3.1 (1.8)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. symptoms: mean (SD)	1.2 (1.3)	2.3 (1.8)	3.9 (2.3)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. contacts with doctor in last year: mean (SD)	5.0 (7.1)	9.4 (11.4)	15.5 (17.0)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Admitted to hospital in last year (%)	7.9	16.5	30.0	<0.001 <sup>‡</sup>	<0.001 <sup>Δ</sup>
<b>Functional</b>					
No. limitations with ADLs: mean (SD)	0.0 (0.2)	0.2 (0.7)	1.1 (1.5)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. limitations with IADLs: mean (SD)	0.1 (0.3)	0.5 (1.0)	1.8 (1.8)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Received home care: personal/nursing (%)	1.9	5.9	18.6	<0.001 <sup>‡</sup>	<0.001 <sup>Δ</sup>
Received home care: domestic tasks (%)	1.9	10.3	28.7	<0.001 <sup>‡</sup>	<0.001 <sup>Δ</sup>
<b>Psychological and cognitive</b>					
EURO-D score (min: 0; max: 12) (SD)	1.9 (1.8)	3.7 (2.4)	5.5 (2.6)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Verbal fluency test score: mean (SD)	20.2 (7.1)	16.5 (6.7)	13.1 (6.0)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Delayed word recall score: mean (SD)	3.9 (2.0)	3.0 (2.0)	1.9 (1.8)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>

	Non-frail (N=10,517)	Pre-frail (N=1,871)	Frail (N=395)	P value	Age- adjusted P value
<b>Frailty phenotype: DFactor model</b>					
Exhaustion: yes (cp)	0.17	0.47	0.80	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Weight loss: yes (cp)	0.03	0.12	0.42	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Handgrip strength: mean (Kg)	45.8	36.2	26.5	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Slowness: yes (cp)	0.01	0.29	0.92	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
Low activity: hardly ever, or never (cp)	0.03	0.21	0.62	<0.001 <sup>Ω</sup>	<0.001 <sup>Ω</sup>
<b>Sociodemographic</b>					
Age: mean (SD)	62.6 (9.0)	69.1 (10.4)	74.0 (10.2)	<0.001 <sup>#</sup>	-
Years of education: mean (SD)	10.9 (4.3)	8.6 (4.7)	7.8 (5.0)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
<b>Physical</b>					
Self-rated health (best:1; worst:5): mean (SD)	2.7 (1.0)	3.7 (1.0)	4.4 (0.7)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. chronic diseases: mean (SD)	1.2 (1.2)	2.1 (1.5)	2.9 (1.7)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. symptoms: mean (SD)	0.9 (1.1)	2.0 (1.7)	3.4 (2.1)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. contacts with doctor in last year: mean (SD)	4.9 (7.6)	10.1 (12.4)	17.5 (20.2)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Admitted to hospital in last year (%)	10.4	23.5	36.7	<0.001 <sup>‡</sup>	<0.001 <sup>Δ</sup>
<b>Functional</b>					
No. limitations with ADLs: mean (SD)	0.0 (0.3)	0.3 (0.9)	1.3 (1.7)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
No. limitations with IADLs: mean (SD)	0.1 (0.3)	0.5 (1.1)	1.9 (2.0)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Received home care: personal/nursing (%)	1.6	6.8	17.2	<0.001 <sup>‡</sup>	<0.001 <sup>Δ</sup>
Received home care: domestic tasks (%)	1.0	6.9	19.2	<0.001 <sup>‡</sup>	<0.001 <sup>Δ</sup>
<b>Psychological and cognitive</b>					
EURO-D score (min: 0; max: 12) (SD)	1.4 (1.6)	3.1 (2.3)	5.2 (2.7)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Verbal fluency test score: mean (SD)	20.1 (7.1)	15.9 (6.4)	13.2 (5.7)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>
Delayed word recall score: mean (SD)	3.4 (1.9)	2.5 (1.8)	1.7 (1.6)	<0.001 <sup>#</sup>	<0.001 <sup>§</sup>

**FRAILTY CLASSES:  
MORTALITY PREDICTION  
(UNADJUSTED AND ADJUSTED)**

## Women

## Men

	Non-frail (N=10,420)	Pre-frail (N=4,025)	Frail (N=1,133)	P value	Age- adjusted P value	Non-frail (N=10,517)	Pre-frail (N=1,871)	Frail (N=395)	P value	Age- adjusted P value
<b>Mortality at Wave 2</b>										
% dead	0.7	2.6	9.2	<0.001 <sup>z</sup>	<0.001 <sup>Δ</sup>	2.0	8.8	22.6	<0.001 <sup>z</sup>	<0.001 <sup>Δ</sup>



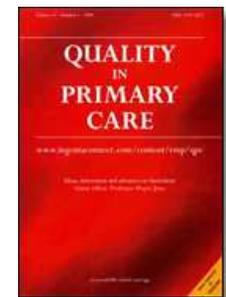
SHARE-FI categories: results of the logistic regression models for the prediction of mortality.

	Women (N = 11,384)					Men (N = 9,163)				
	B	SE	P	OR	CI (95%)	B	SE	P	OR	CI (95%)
<b>Model 1: unadjusted</b>										
Non-frail	-	-	<0.001	1.0	-	-	-	<0.001	1.0	-
Pre-frail	1.30	0.19	<0.001	3.7	2.5 - 5.3	1.57	0.13	<0.001	4.8	3.7 - 6.2
Frail	2.66	0.19	<0.001	14.2	9.7 - 20.8	2.68	0.18	<0.001	14.6	10.3 - 20.7
<b>Model 2: adjusted by age</b>										
Age	0.09	0.01	<0.001	1.1	1.1 - 1.1	0.07	0.01	<0.001	1.1	1.1 - 1.1
Non-frail	-	-	<0.001	1.0	-	-	-	<0.001	1.0	-
Pre-frail	0.72	0.20	<0.001	2.1	1.4 - 3.0	1.11	0.14	<0.001	3.0	2.3 - 4.0
Frail	1.57	0.22	<0.001	4.8	3.1 - 7.4	1.93	0.19	<0.001	6.9	4.7 - 10.2
<b>Model 3: adjusted by age, number of chronic diseases and number of limitations with ADLs</b>										
Age	0.08	0.01	<0.001	1.1	1.1 - 1.1	0.07	0.01	<0.001	1.1	1.1 - 1.1
Number of chronic diseases	0.08	0.05	0.097	1.1	1.0 - 1.2	0.10	0.04	0.019	1.1	1.0 - 1.2
Number of limitations with ADLs	0.12	0.07	0.111	1.1	1.0 - 1.3	0.12	0.07	0.106	1.1	1.0 - 1.3
Non-frail	-	-	<0.001	1.0	-	-	-	<0.001	1.0	-
Pre-frail	0.63	0.20	0.002	1.9	1.3 - 2.8	1.01	0.15	<0.001	2.8	2.1 - 3.7
Frail	1.34	0.24	<0.001	3.8	2.4 - 6.1	1.66	0.22	<0.001	5.3	3.4 - 8.1
<b>Model 4: adjusted by age, number of chronic diseases, number of limitations with ADLs, self-rated health, education, EURO-D score</b>										
Age	0.09	0.01	<0.001	1.1	1.1 - 1.1	0.08	0.01	<0.001	1.1	1.1 - 1.1
Number of chronic diseases	0.04	0.07	0.533	1.0	0.9 - 1.2	-0.08	0.07	0.250	0.9	0.8 - 1.1
Number of limitations with ADLs	0.00	0.11	0.990	1.0	0.8 - 1.3	0.10	0.11	0.333	1.1	0.9 - 1.4
Self-rated health	0.20	0.14	0.149	1.2	0.9 - 1.6	0.67	0.12	<0.001	2.0	1.5 - 2.5
Number of years of education	0.01	0.03	0.714	1.0	1.0 - 1.1	0.01	0.02	0.796	1.0	1.0 - 1.0
EURO-D	0.02	0.05	0.754	1.0	0.9 - 1.1	0.05	0.04	0.246	1.1	1.0 - 1.1
Non-frail	-	-	0.022	1.0	-	-	-	0.018	1.0	-
Pre-frail	0.41	0.29	0.158	1.5	0.9 - 2.7	0.50	0.23	0.033	1.6	1.0 - 2.6
Frail	1.06	0.39	0.006	2.9	1.3 - 6.2	0.92	0.34	0.007	2.5	1.3 - 4.9

# Further validation: incident disability

(Total SHARE sample  $N = 28,361$ )

- By wave 2, 3.6% of the non-frail, 12.2% of the pre-frail and 30.4% of the frail had increased the number of ADL disabilities by at least one.
- Likewise, 6.6% of the non-frail, 20.4% of the pre-frail and 36.6% of the frail had, by wave 2, increased the number of IADL disabilities by at least one.



# FRAILTY CALCULATORS

<https://sites.google.com/a/tcd.ie/share-frailty-instrument-calculators/>



## SHARE-FI CALCULATOR: FEMALES



### EXHAUSTION

In the last month, have you had too little energy to do the things you wanted to do?

### LOSS OF APPETITE

What has your appetite been like?

### WEAKNESS

Maximum grip strength in Kilograms:

Right hand:

Attempt 1:

Attempt 2:

Left hand:

Attempt 1:

Attempt 2:

### WALKING DIFFICULTIES

Because of a health or physical problem, do you have any difficulty doing any of the following everyday activities?  
(Exclude any difficulties that you expect to last less than three months)

Walking 100 metres:

Climbing one flight of stairs without resting:

### LOW PHYSICAL ACTIVITY

How often do you engage in activities that require a low or moderate level of energy such as gardening, cleaning the car, or doing a walk?

**FRAILITY SCORE:**

**FRAILITY CATEGORY:**

## SHARE-FI: FEMMES

<https://sites.google.com/a/tcd.ie/share-frailty-instrument-calculators/>



### Épuisement

Au cours du dernier mois, avez-vous manqué d'énergie pour réaliser les choses que vous vouliez faire?

Non

### Appétit

Comment a été votre appétit?



Pas de diminution de l'appétit/mangé ni plus ni moins que d'habitude

## SHARE-FI: FRAUEN



### Müdigkeit

Hatten Sie im letzten Monat zu wenig Energie um dass zu tun was sie tun wollten?

Nein

### Appetit

Wie war Ihr Appetit?



Keine Verminderung von Nahrungsbedürfnissen/weder mehr noch weniger als üblich geg

## SHARE-FI: MUJERES



### Sentirse exhausta

En el último mes, ¿ha sentido que no tenía suficiente energía para hacer las cosas que quería hacer?

No

### Apetito

¿Qué tal apetito tiene?



No ha disminuido/he estado comiendo ni más, ni menos de lo habitual

# **COMPARISON BETWEEN FRIED'S OPERATIONALISATION AND SHARE-FI**

	Cardiovascular Health Study (CHS)	Survey of Health, Ageing and Retirement in Europe (SHARE)
Baseline sample	<i>N</i> = 5,317 aged <u>65+</u> (3 US states: California, Maryland, Pennsylvania)	<i>N</i> = 28,361 aged <u>50+</u> (12 European countries)
Follow up	Annual for 7 years (main cohort)	Once (mean time: 2.4 years)
Frailty indicators	<ul style="list-style-type: none"> <li>•Unintentional weight loss</li> <li>•Exhaustion</li> <li>•Weakness (grip strength)</li> <li>•Slow walking speed</li> <li>•Low physical activity</li> </ul>	<ul style="list-style-type: none"> <li>•<i>Loss of appetite</i></li> <li>•Exhaustion</li> <li>•Weakness (grip strength)</li> <li>•<i>Functional difficulties</i> (walk 100m, stairs)</li> <li>•Low physical activity</li> </ul>
Method for definition of frailty	≥ 3 criteria present (3 criteria with arbitrary lowest 20% criterion)	Latent class analysis No arbitrary cut-offs
Frailty prevalence	Overall 6.9% (original cohort: 7.3% women, 4.9% men)	7.3% women 3.1% men
Outcomes	<ul style="list-style-type: none"> <li>Incident disease ✓</li> <li>Hospitalization ✓</li> <li>Falls ✓</li> <li>Disability ✓</li> <li>Mortality ✓</li> </ul>	<ul style="list-style-type: none"> <li>Disability ✓</li> <li>Mortality ✓</li> </ul>
Directly obtainable	<b>No</b> (requires <i>post-hoc</i> analyses on a reference sample)	<b>Yes</b> (via SHARE-FI online calculators)

# Conclusions

- SHARE-FI has sufficient construct and predictive validity, and is readily and freely accessible via web calculators.
- SHARE-FI represents one of the first European research efforts towards a common frailty language at the community level.

# Impact (1)

- Pialoux T, Goyard J, Lesourd B. Screening tools for frailty in primary health care: a systematic review. **Geriatrics and Gerontology International** 2012, Jan 10:

*“It is difficult to show which tool today is the best for screening for frailty in the elderly in primary care settings. Two instruments are potentially suitable – the Tilburg Frailty Indicator and the **SHARE Frailty Instrument**”.*

# Impact (2)

- Marsh R. Does targeted case-finding of the frail elderly result in improved QIPP outcomes? A literature review. Cambridge: **NHS Evidence Adoption Centre** East of England, 2012.  
Available from:  
<http://www.eac.cpft.nhs.uk/viewResource.aspx?id=18686>
- “*SHARE-FI seems useful and highly usable for individual assessment, by self-reporting or during a clinical assessment*”
- SHARE-FI was one of the recommended tools for the identification of frailty in the context of Quality, Innovation, Productivity and Prevention (QIPP) programmes.



Thank you!

