



Co-funded by
the Health Programme
of the European Union

advant**AGE**
MANAGING FRAILTY

KLINIČNA OBRAVNAVA KRHKOSTI

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KONFERENCA: OBVLADOVANJE KRHKOSTI DANES ZA JUTRI

Kongresni center Brdo, 22. november 2017

ADVANTAGE JA

Joint Action on Prevention of frailty 2017-2019

Zakaj umiramo ?

LIFE EXPECTANCY THROUGH THE AGES

Early humans did not generally live long enough to develop heart disease, cancer or loss of mental function. A snapshot of how life expectancy has changed, and the big killers of each era:

AVERAGE LIFE EXPECTANCY

30 years



Neanderthals (30,000 years ago): Died of injuries caused by rock falls, hunting accidents and conflicts. Food scarcity led to malnutrition. These hunter-gatherer groups contracted diseases that spread from animals. Rabies, tuberculosis, brucellosis, yellow fever and encephalitis were widespread.

38

Neolithic (8500 BC to 3500 BC): Agriculture, irrigation and urbanization brought problems associated with settled populations, such as fecal contamination of water and diseases such as cholera, smallpox, typhoid, polio and influenza. Malaria and other diseases carried by mosquitoes and insects, which fed on domesticated animals, appeared.



35 **Classical Greece and Rome** (500 BC to 500 AD): Tuberculosis, typhoid fever, smallpox and scarlet fever spread among the denser urban populations. Malnutrition, gastroenteritis and violence were also big killers.

48 EARLY MEDIEVAL



Medieval period (500 AD to 1500 AD): Life expectancy grew with urbanization, but famine caused by crop failures and bubonic plague were the big killers. The Black Death (1347-1351) wiped out 25 million people in Europe and 60 million in Asia, returning several times, culminating in the Great Plague of London (1664-1666). By 1500, life expectancy had dropped back to 38.

38 LATE MEDIEVAL

40

Victorian (1850s to 1900): Typhus, typhoid fever, rickets, diphtheria, tuberculosis, scarlet fever and cholera raged in crowded cities.



MEN **70** WOMEN **75**

1900s: Better health care, sanitation and living conditions boosted life expectancy to 70 for men and 75 for women by 1950.

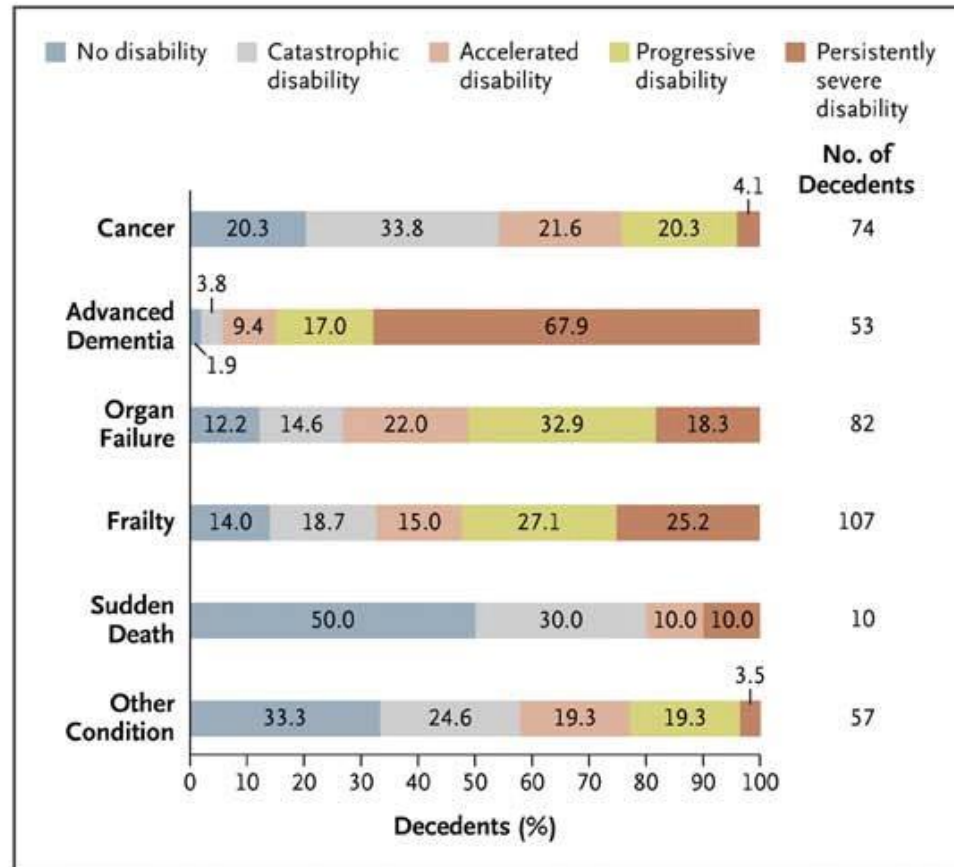
CANADA: MEN **82** WOMEN **85**

Today: Cancer, heart disease and stroke are the biggest killers in the developed world. Our longer lifespan also comes with unprecedented loss of mental function and mobility problems.

RESEARCH BY RICK SZNAJDER/TORONTO STAR LIBRARY

SOURCES: JOURNAL OF POPULATION RESEARCH, PRINCETON UNIVERSITY, STANFORD UNIVERSITY, WORLD HEALTH ORGANIZATION

Zakaj umiramo ?



Elementi klinične obravnave krhkosti

- Definicija
- *Preprečevanje*
- Prepoznavanje
- Zdravljenje krhkosti kot take / preprečevanje zapletov

Kaj je krhkost ?



Definicija krhkosti

Krhkost je medicinski sindrom, ki se razvije kot posledica številnih vzrokov in pridruženih dejavnikov. Za krhkost so značilne zmanjšana mišična moč, vzdržljivost in fiziološke rezerve, kar predstavlja visoko tveganje za povečanje odvisnosti ali smrt.

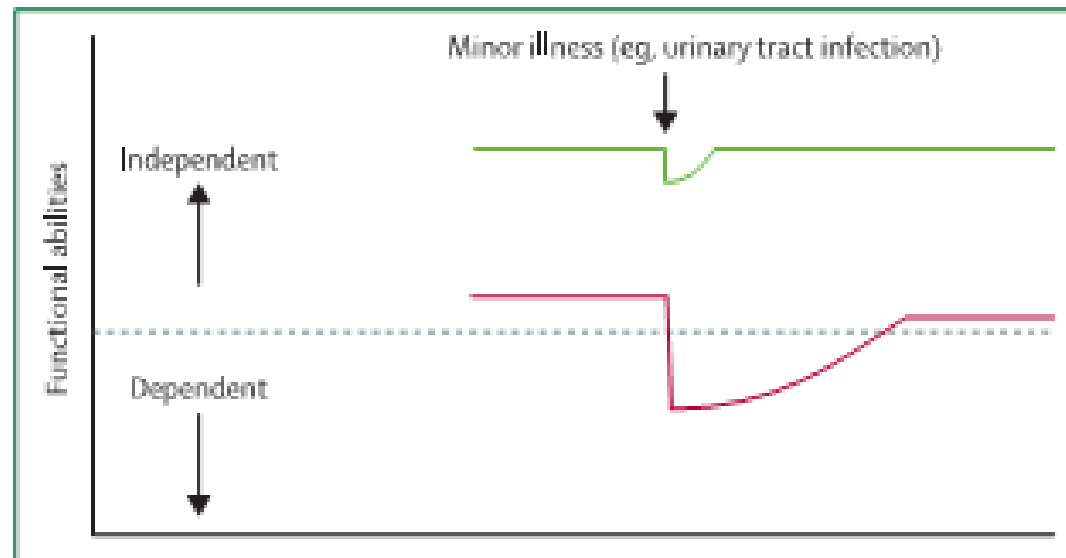
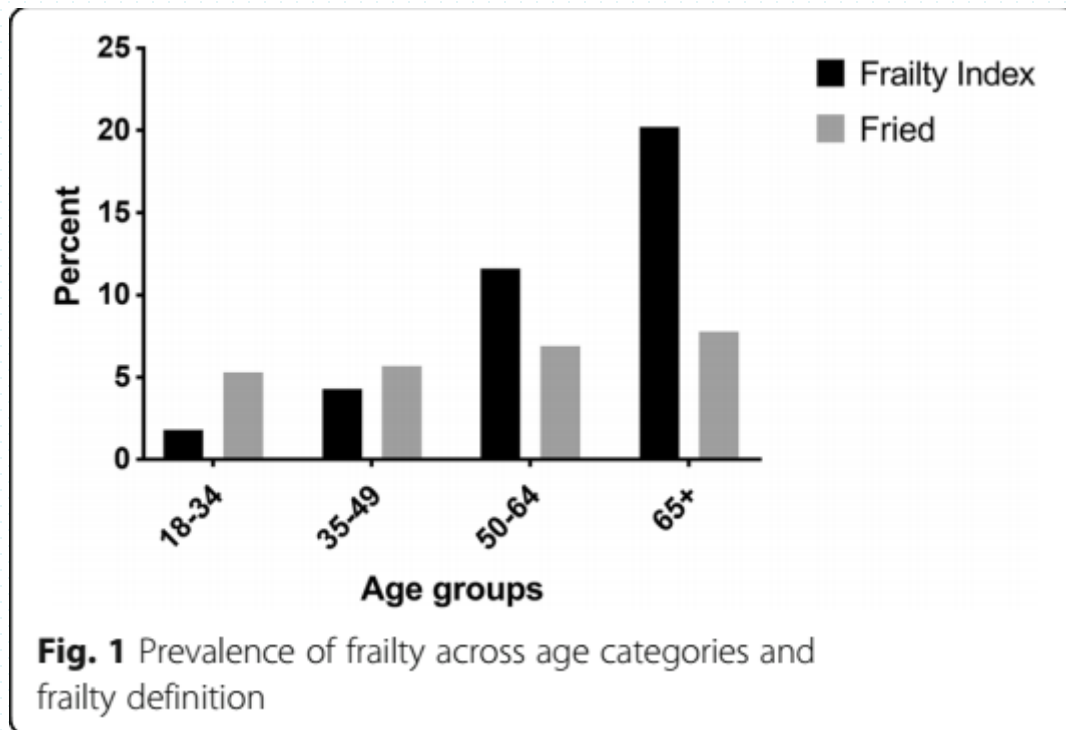


Figure 1: Vulnerability of frail elderly people to a sudden change in health status after a minor illness

Epidemiologija krhkosti



Starostna skupina (starost)	Prevalenca FI (%)	Prevalenca Fried (%)
18 - 34	1.8	5.3
35 - 49	4.3	5.7
50 - 64	11.6	6.9
65+	20.2	7.8
85	43	//

Orodja za odkrivanje krhkosti

- Fenotip (CHS; Fried)
- Akumulacija deficitov (Kazalnik krhkosti; FI)
- SOF
- Akumulacija deficitov CGO (FI-CGO)
- Edmontonska lestvica krhkosti
- Klinična lestvica krhkosti
- Groningenski kazalnik krhkosti
- Tilburški kazalnik krhkosti
-



Orodja za odkrivanje krhkosti

Fenotipska krhkost

- Izguba teže (-4.5kg/12m)
- Pomanjkanje energije
- Počasna hoja (0.8m/s)
- Zmanjšana moč stiska roke (20 oz 30 kg)
- Majhna poraba energije (270 oz 340 kkal/t)

Kazalnik krhkosti (FI)

- 30 – 40 komponent CGO:
- Osnovne d. aktivnosti
- Instrumentalne d. aktivnosti
- Bolezenska stanja
- Čutila...
- FI= deficiti/možnimi deficiti

Pomembnost prepoznavanja/obravnavanja krhkosti

Table 3. Numbers and Rates of Transitions According to Follow-up Interval*

Transition	Baseline to 18 mo		18 to 36 mo		36 to 54 mo	
	No.	Rate, %	No.	Rate, %	No.	Rate, %
Nonfrail to	n = 167		n = 126		n = 120	
Nonfrail	86	51.5	69	54.8	57	47.5
Prefrail	67	40.1	47	37.3	52	43.3
Frail	7	4.2	8	6.3	7	5.8
Death	7	4.2	2	1.6	4	3.3
Prefrail to	n = 369		n = 316		n = 253	
Nonfrail	44	11.9	52	16.5	24	9.5
Prefrail	215	58.3	174	55.1	146	57.7
Frail	92	24.9	79	25.0	66	26.1
Death	18	4.9	11	3.5	17	6.7
Frail to	n = 183		n = 212		n = 224	
Nonfrail	0	0.0	0	0.0	2	0.9
Prefrail	42	23.0	38	17.9	29	12.9
Frail	117	63.9	140	66.0	148	66.1
Death	24	13.1	34	16.0	45	20.1

Intervencije za preprečevanje/zmanjševanje krhkosti

- Celovita geriatrična ocena
- Nadomeščanje vitamina D
- Telesna dejavnost
- Kombinacija prehranske intervencije, kognitivnega treninga in telesne dejavnosti
- Fizioterapija na domu
- Kontakti z zdravstvenim osebjem brez intervencije

Celovita geriatrična ocena (CGO)

- CGO je multidimenzionalen in interdisciplinaren diagnostični proces, s katerim se ugotavljajo medicinske, funkcionalne, psihološke in socialne značilnosti krhkega starega človeka.
- Cilj CGO je izdelava celovitega in koordiniranega načrta obravnave in dolgotrajnega spremljanja.
- CGO preusmeri žarišče obravnave od bolezni na kvaliteto življenja, funkcionalno stanje in prognozo.
- Za izvedbo CGO se uporabljajo standardizirana orodja.

Celovita geriatrična ocena

Medicinska ocena	Lista posameznikovih problemov (vrednote in prioritete)
	Komorbidna stanja in prizadetost zaradi bolezni
	Pregled zdravil
	Ocena požiranja in prehranjenosti (GUSS, MNA)
	Ocena prognoze (CCI, 5IS, PPS, PPI, PaPS)
Psihološka ocena	Testiranje spoznavnih sposobnosti (demenca, detekcija delirija; KPSS, MiniCog, MOCA, CAM)
	Ocena razpoloženja (GDS)

Funkcionalna ocena	Osnovne dnevne aktivnosti (Barthel)
	Instrumentalne dnevne aktivnosti (Lawton)
	Ocena telesne zmogljivosti in aktivnosti (6MTH)
	Ocena tveganja za padce (Morse, 5STS, FDR, TUG, Vh))
Socialna ocena in ocena okolja	Ocena domačega okolja
	Ocena socialnih in finančnih virov
	Ocena komunikacijskih in transportnih možnosti

A multifactorial interdisciplinary intervention reduces frailty in older people: randomized trial

Table 5 Primary and secondary outcomes by level of adherence to intervention at 12 months

Outcome ^a	Adherence				P
	<25% (n = 42)	25% to 49% (n = 17)	50% to 74% (n = 23)	75% to 100% (n = 24)	
Frailty	3.24 (2.95 to 3.53)	2.23 (1.76 to 2.70)	2.28 (1.88 to 2.68)	2.12 (1.74 to 2.51)	<0.001
Short Physical Performance Battery	4.83 (4.14 to 5.53)	5.58 (4.47 to 6.69)	6.14 (5.21 to 7.08)	7.43 (6.53 to 8.34)	<0.001
Lower extremity continuous summary performance score	1.59 (1.44 to 1.73)	1.74 (1.50 to 1.97)	1.91 (1.71 to 2.11)	1.96 (1.77 to 2.15)	0.01
Barthel Index	86.3 (81.8 to 90.8)	91.0 (83.8 to 98.2)	94.0 (87.9 to 100)	91.4 (85.5 to 97.4)	0.21
Geriatric Depression Scale	5.44 (4.78 to 6.11)	4.16 (3.09 to 5.23)	4.32 (3.42 to 5.22)	3.95 (3.07 to 4.83)	0.03
Health-related quality of life (EuroQol-5D visual analog scale)	52.2 (46.9 to 57.6)	51.2 (42.6 to 59.8)	60.0 (52.8 to 67.2)	69.4 (62.3 to 76.4)	0.001

Comprehensive geriatric assessment for older adults admitted to hospital

- 22 RCT (10 315 oseb)
- CGO na geriatričnem oddelku vs običajna oskrba
- Rezultati:

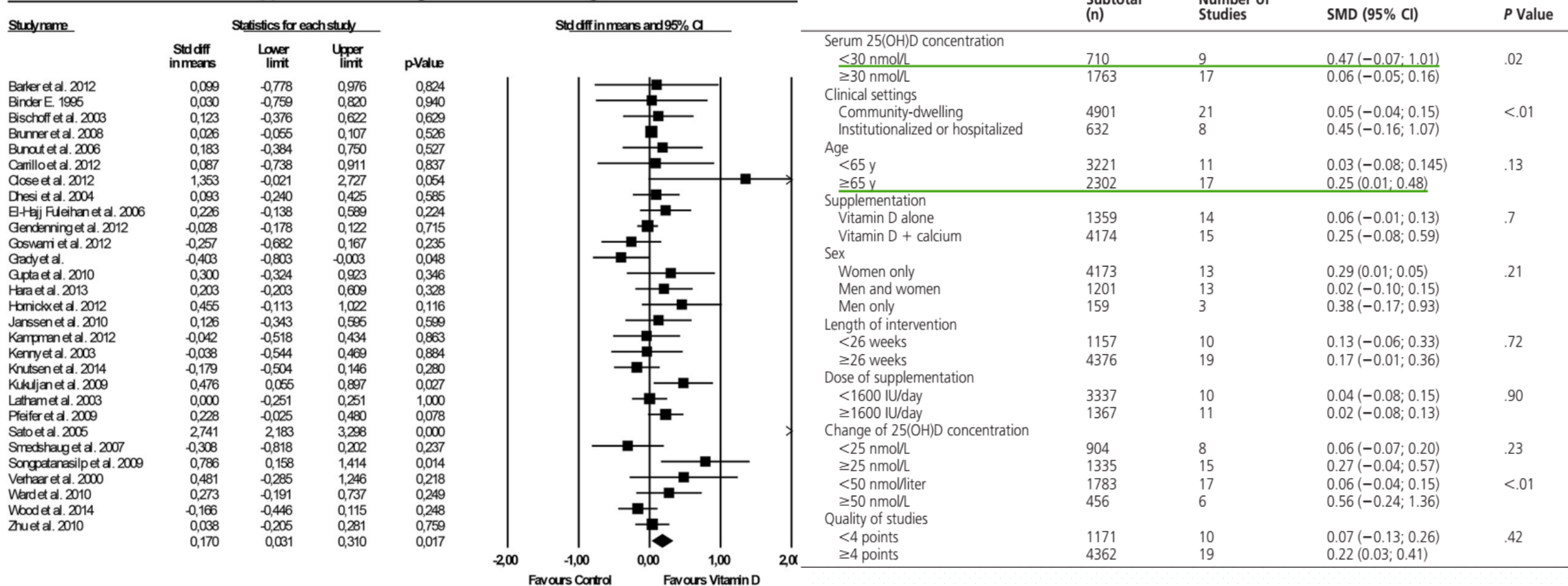
Doma 12 m po hospitalizaciji: **NNT 20**

Doma 6 m po hospitalizaciji: **NNT 13**

Smrt ali funkcionalni upad (12m): **NNT 17**

The effects of vitamin D on skeletal muscle strength, muscle mass, and muscle power: a systematic review and meta-analysis of randomized controlled trials.

Effect of vitamin D supplementation on global muscle strength



Telesna vadba (+/- prehrana in kognitivna vadba)

**The Effectiveness of Exercise Interventions for the Management of Frailty:
A Systematic Review**

**Cognitive Effects of Multi-domain Interventions among Pre-frail and Frail
Community-living Older Persons: Randomized Controlled Trial.**

A pilot randomized controlled trial to improve geriatric frailty

Multikomponentna vadba, vsaj 3 mesece, 3 x 60 min tedensko

Vadba > 5 mesecev, krajše epizode vadbe (30 – 45 min), bolj primerno

Korist dodane kognitivne vadbe in prehrane

Fizioterapija na domu

- RCT (188 oseb; krhki; 75+)
- FTH na domu
- Rezultati:
 - Zmanjšanje IADL nezmožnosti 17.7% ob 7m (P=.036) in 12.0% ob 12m (P=.143)
 - Izboljšanje pomičnosti za 7.2% - 15.6% in splošne telesne zmogljivosti ob 7 in 12m.

Zaključek

- Krhkost ni bolezen ali nezmožnost in jo moramo aktivno iskati
- Fenotipska krhkost in Model akumulacije deficitov
- Celovita geriatrična ocena
- Multidimenzionalne intervencije so učinkovite

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