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FRAILTY – skrøpelighet
Joint Action ADVANTAGE

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The Holy Grail of Geriatric Medicine
Biologisk aldring

FRAILTY – skrøpelighet (eller sårbarhet?)

Reduced capacity to respond to stressors, caused by a decline in functional reserves.

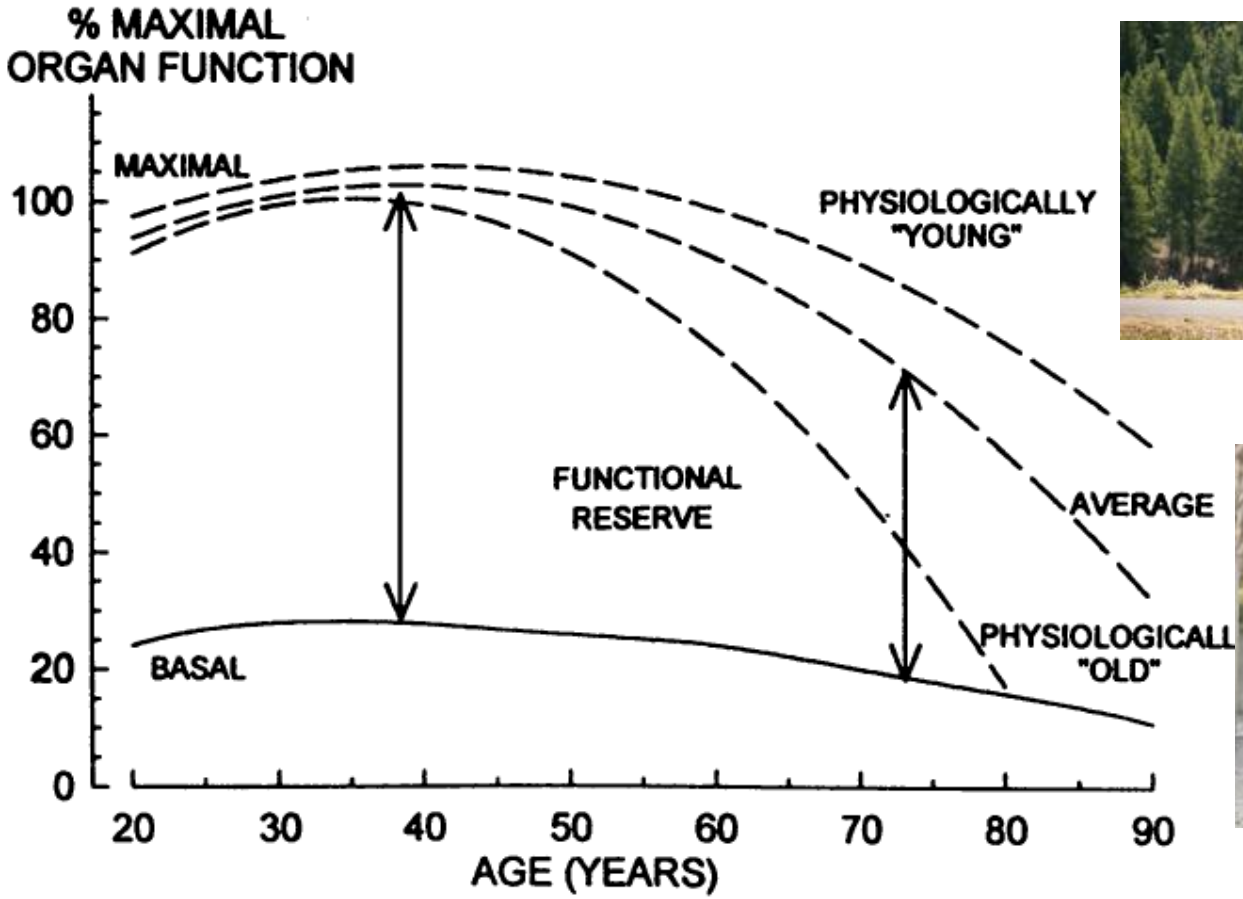
Disability is often preceded by frailty.

Disability is the main result of three concurrent factors in older people (60+)

- *The ageing process*
- *Unhealthy lifestyle*
- *Health disorders*

Rodriguez-Manas & Fried Lancet 2015

Nedgang i fysiologisk kapasitet: Heterogenitet



Muravchik, Anesthesia 5th ed, 2000

FYSIOLOGISK KAPASITET:

Organfunksjon

Normal

Opphørt

LIKEVEKSTMEKANISMER – HOMEOSTASE
Samspill mellom flere organer for å opprettholde funksjon; hjernens blodsirkulasjon, kroppstemperatur, væskebalanse, ernæringsstatus, balanse, kognisjon.

Flaatten HUS

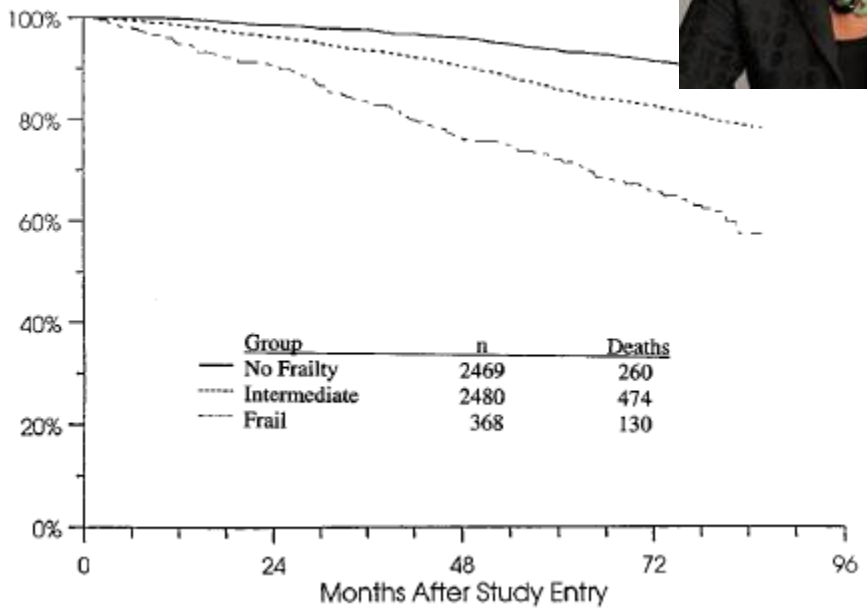
Frailty – først beskrevet av Linda Fried i 1992
Reduserte reserver og økt dødelighet

- Frieds kriterier[1]

- Unintentional weight loss
- Exhaustion
- Low physical activity
- Slow walking speed
- Reduced grip strength

3 kriterier: frailty

1-2 kriterier: intermediate frailty



[1]*Fried et al. J Ger Med Sci 2001*

Frailty – beskrevet av Kenneth Rockwood i 1994

Geriatric medicine and the challenge of complexity

Rockwood et al. Can Med Association 1994; 150:499-507
Rockwood et al. J Am Geriatric Society 1996; 44:578-82

DALHOUSIE UNIVERSITY
Inspiring Minds

Capital Health

Frailty-status kan brukes til flere formål

- På populasjonsnivå – beskriver biologisk aldring/funksjon
- På individnivå:
  - Som grunnlag for forebyggende tiltak og behandling
  - For å vurdere risiko
  - For seleksjon til forskjellige behandlingstyper
  - For prognostikk

Måling av skrøpelighet (frailty)

- **Frailty skalaer:** summerer funksjons- og fysiologiske variabler (Fried – frailty fenotype)
- **Frailty indekser:** summerer negative faktorer, både relatert til aldring og til sykdom (Rockwood)
- **Frailty indikatorer:** for eksempel ganghastighet eller gripestyrke
- **Bred geriatrisk vurdering (CGA):** multidimensjonal kartlegging av alle aspekter ved frailty, multimobiditet og funksjonssvikt

Vurdering av skrøpelighet (frailty): Fenotype

FP criteria	Measurement
Weakness	Grip strength: lowest 20% (by sex, body mass index)
Slowness	Walking time/15 feet: slowest 20% (by sex, height)
Low level of physical activity	Kcal/week: lowest 20% Males: 383 Kcal/week Females: 270 Kcal/week
Exhaustion; poor endurance	"Exhaustion" (self-report)
Weight loss	>10 lb lost unintentionally in prior year

Table 2 Eleven items of the modified Frailty Index

History of diabetes mellitus
History of congestive heart failure
History of hypertension requiring medication
History of either transient ischemic attack or cerebrovascular accident
Functional status 2 (not independent)
History of myocardial infarction
History of either peripheral vascular disease or rest pain
History of cerebrovascular accident with neurological deficit
History of either COPD or pneumonia
History of either prior PCI, PCS, or angina
History of impaired sensorium

Notes: Functional status measured in the 30 days prior to surgery. The presence of each variable was scored as 1 point. The score ranges 0–11, with a score 0 representing absence of frailty, while a score of 11 represents highest degree of frailty.

Abbreviations: COPD, chronic obstructive pulmonary disease; PCI, percutaneous coronary intervention; PCS, prior cardiac surgery.

Clinical Frailty Scale

1. **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2. **Well** – People who have no active disease symptoms but are less fit than Category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3. **Managing Well** – People whose medical problems are well controlled, but are not regularly active beyond routine walking.

4. **Vulnerable** – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up," and/or being tired during the day.

5. **Mildly Frail** – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6. **Moderately Frail** – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.

7. **Severely Frail** – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8. **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. **Terminally Ill** – Approaching the end of life. This category applies to people with a life expectancy < 6 months, who are not otherwise evidently frail.

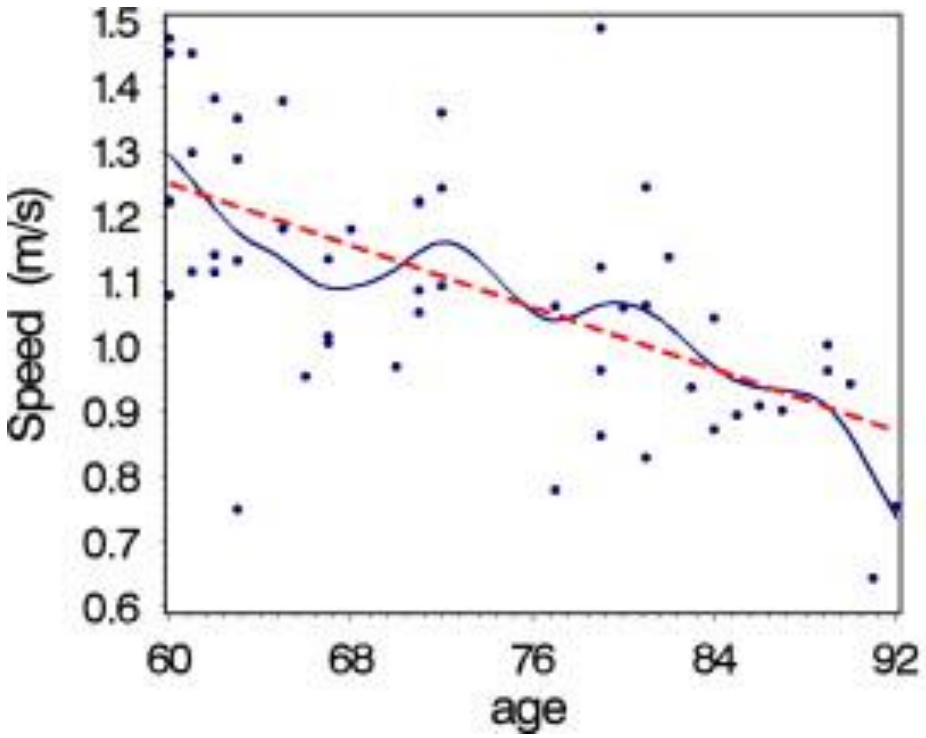
Where dementia is present, the degree of frailty usually corresponds to the degree of dementia:

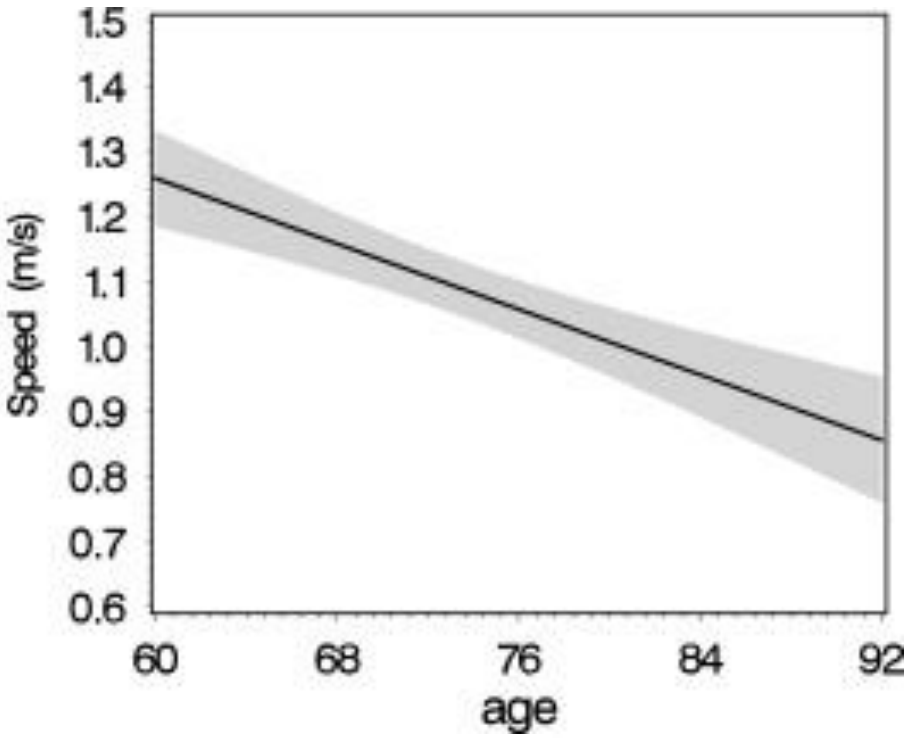
- **Mild dementia** – includes forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.
- **Moderate dementia** – recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.
- **Severe dementia** – they cannot do personal care without help.

K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489–495

no

Frailty indikator: Ganghastighet reduseres med alder



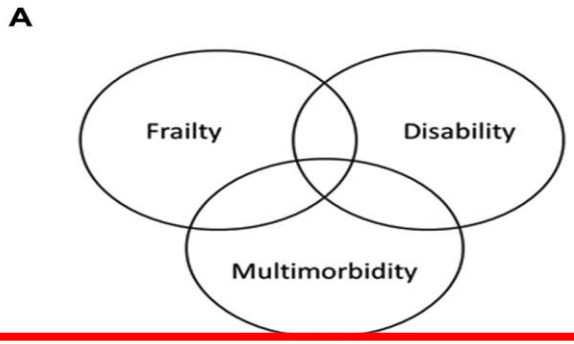


Ganghastighet < 0.8m/sek – FRAIL, gir økt risiko for funksjonssvikt og død

Tre modeller for å forstå FRAILTY Cesari M 2017

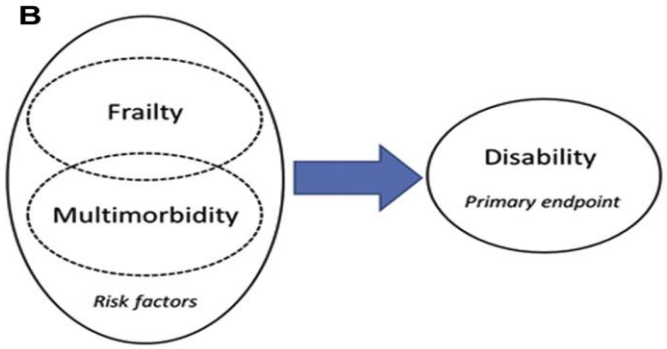
A: Fried modell:

Fenotype



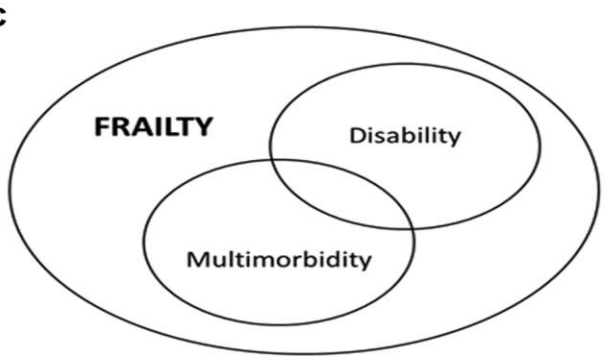
B: Cesari modell:

Risiko for funksjonssvikt



C: Rockwood modell:

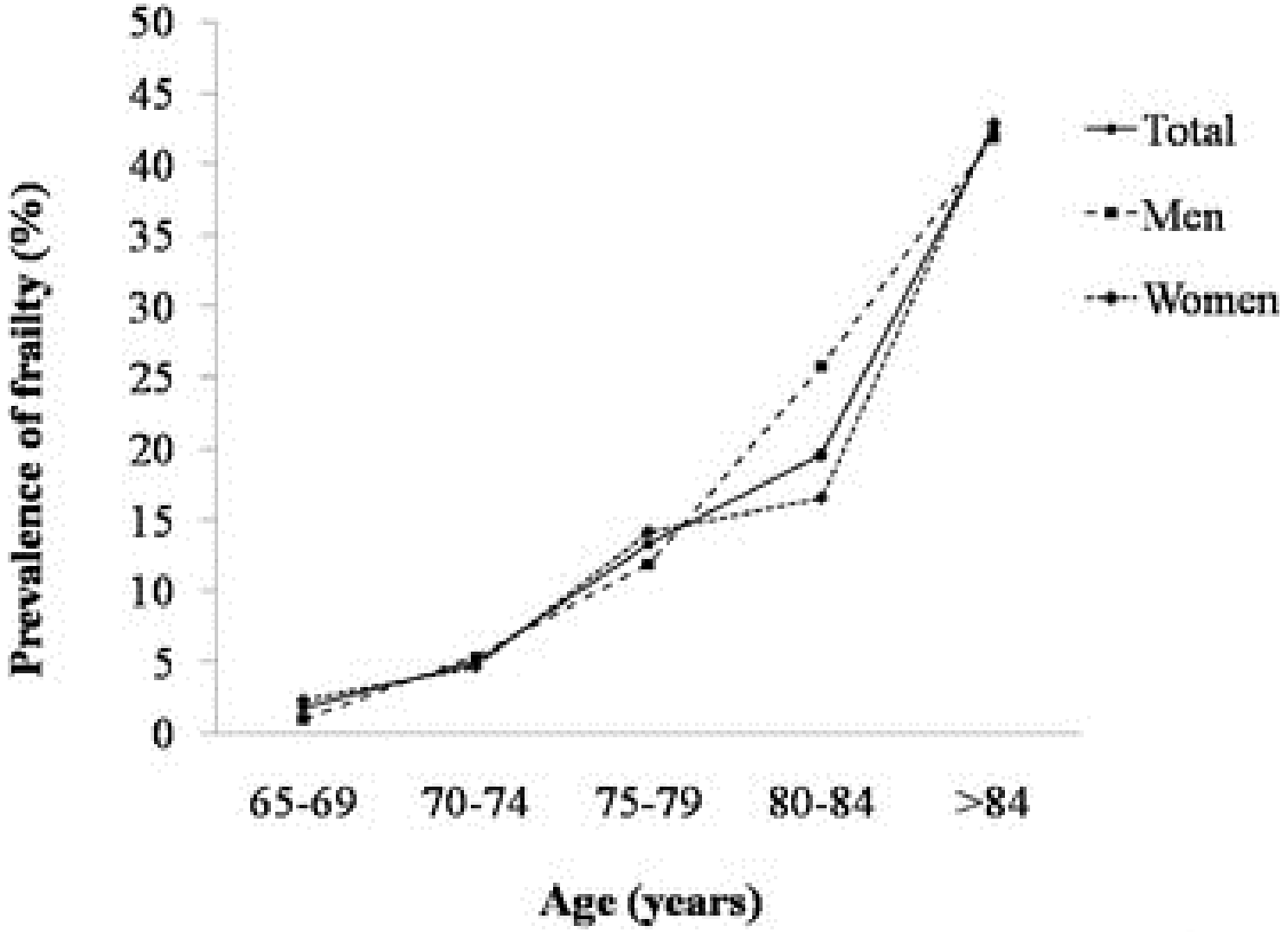
Frailty Index



Frailty prevalens – hjemmeboende eldre

- Stor variasjon i rapportert prevalens (range 4.0–59.1%).
- Totalt: Prevalens av frailty var 10.7%
  - 21 studier; 61,500 deltakere.
- Prevalens fysisk frailty: 9.9%
  - 15 studier; 44,894 deltakere
- 13.6% utvidet fenotype frailty
  - 8 studier; 24,072 deltakere
- Prevalens økte med alder
- Høyere hos kvinner

Collard RM et al. Prevalence of frailty incommunity-dwelling older persons: a systematic review. J Am Geriatr Soc. 2012.



BMC Geriatrics 2015 (Japan)

Muligheter for intervensjon

- Livsstil:
  - Ernæring
  - Fysisk aktivitet og trening
- Optimal behandling (aldersrelaterte sykdommer)
- Sosial og psykologisk støtte - levekår
- Spesifik intervensjon?

Frailty and disability is the main result of three concurrent factors in older people (60+)

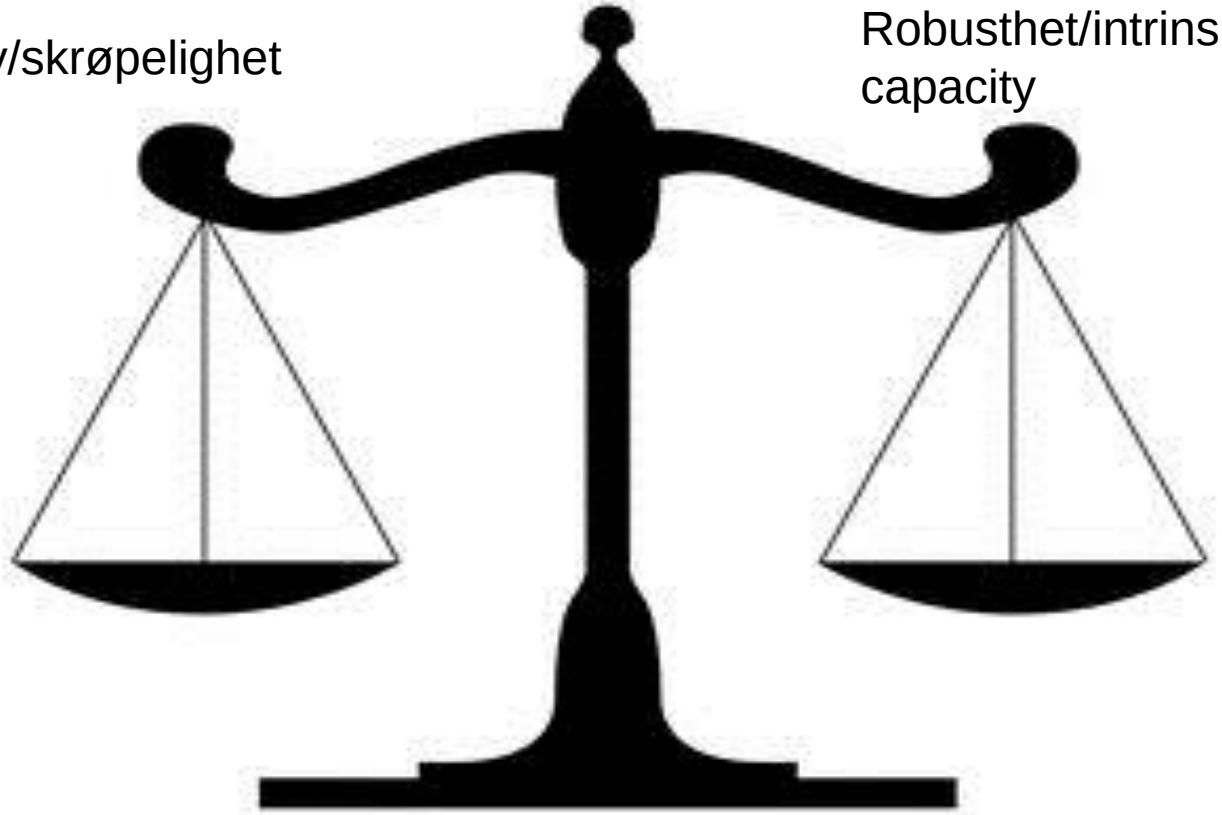
- *The ageing process*
- *Unhealthy lifestyle*
- *Health disorders*

Rodriguez-Manas & Fried Lancet 2015

Terminologi og de eldres preferanser

Frailty/skrøpelighet

Robusthet/intrinsic capacity



JA: Prevention of Frailty.

- Co-funded by the Third European Health Programme – EU 2014-2020.
- Budget of 3.5 million euros for 3 years.
- 22 Member States and over 40 organizations.
- Madrid Health Service-Getafe Hospital with support of the Ministry of Health, Social Services and Equality, coordinates this initiative.
- NIPH participation: WP5 Knowing frailty at population level
  - WP5.1 Prevalence

Outcomes - A common European model:

- Approach frailty, development of improved strategies for diagnosis, care and education for frailty, disability and multi-morbidity
- Prevention of the growing healthcare demands from the increasing burden of disability and chronic diseases.
- Contribution to a more effective response to the needs of older people in care delivery.

advantAGE
MANAGING FRAILTY

Hva Norge kan bidra med:

- **Systematisk review**: Prevalens av frailty (FHI)
  - Hjemmeboende
  - I institusjon (sykehjem)
  - I sykehus (ikke spesielle sykdomsgrupper)
- **Opplysninger om prevalens** som finnes i rapporter, upubliserte studier etc. («grey literature»)
  - Kontakt anette.ranhoff@uib.no

- **Opplysningsvirksomhet, undervisning** – øke kunskapen om frailty i befolkningen, blant helsepersonell og beslutningstakere, politikere

To viktige rapporter om aldring: