Congresso Nazionale SIGG

Gli anziani: radici da preservare

Roma 28 novembre -1 dicembre 2018

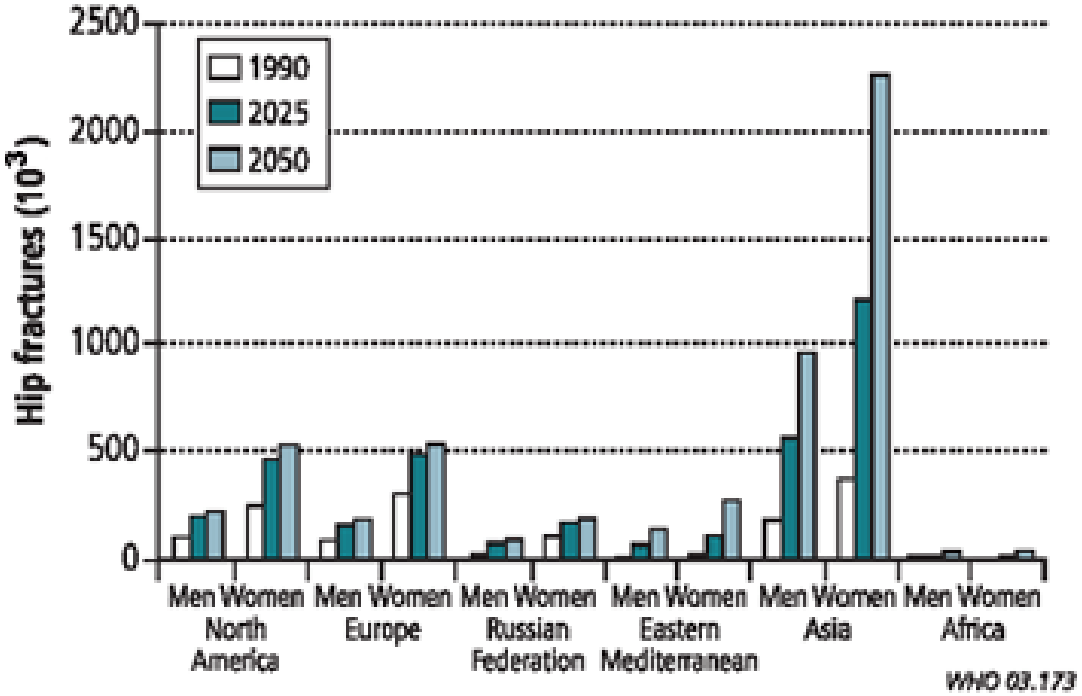
La riabilitazione nella frattura di femore

Dott.ssa Ft Marcella Pevere

SOMMARIO

- entità del problema
- il modello ICF: la visione globale in riabilitazione
- obiettivi e razionale dell’esercizio fisioterapico nelle principali fasi post intervento
- tipologie di esercizi: quale efficacia?
- frattura di femore e deterioramento cognitivo

Fig. 4. **Number of hip fractures in 1990 and those predicted in different regions of the world for 2025 and 2050** (*46*)

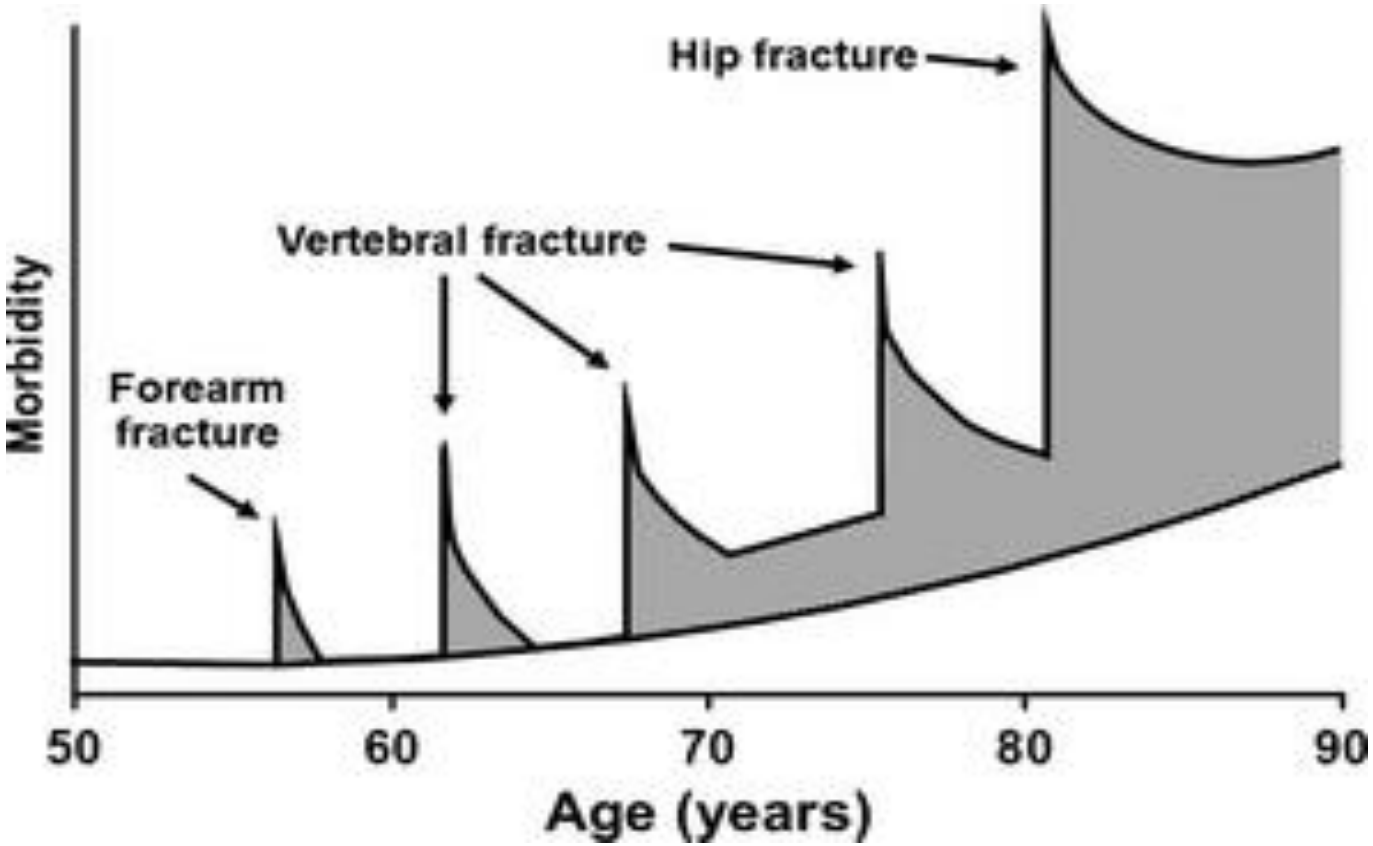


The burden of osteoporotic fractures on healthcare budgets is greater than for breast and prostate cancer, myocardial infarction and approaches that for stroke. Predicted increases in incidence (x2 in 25 yrs in EU) could not handle by current systems

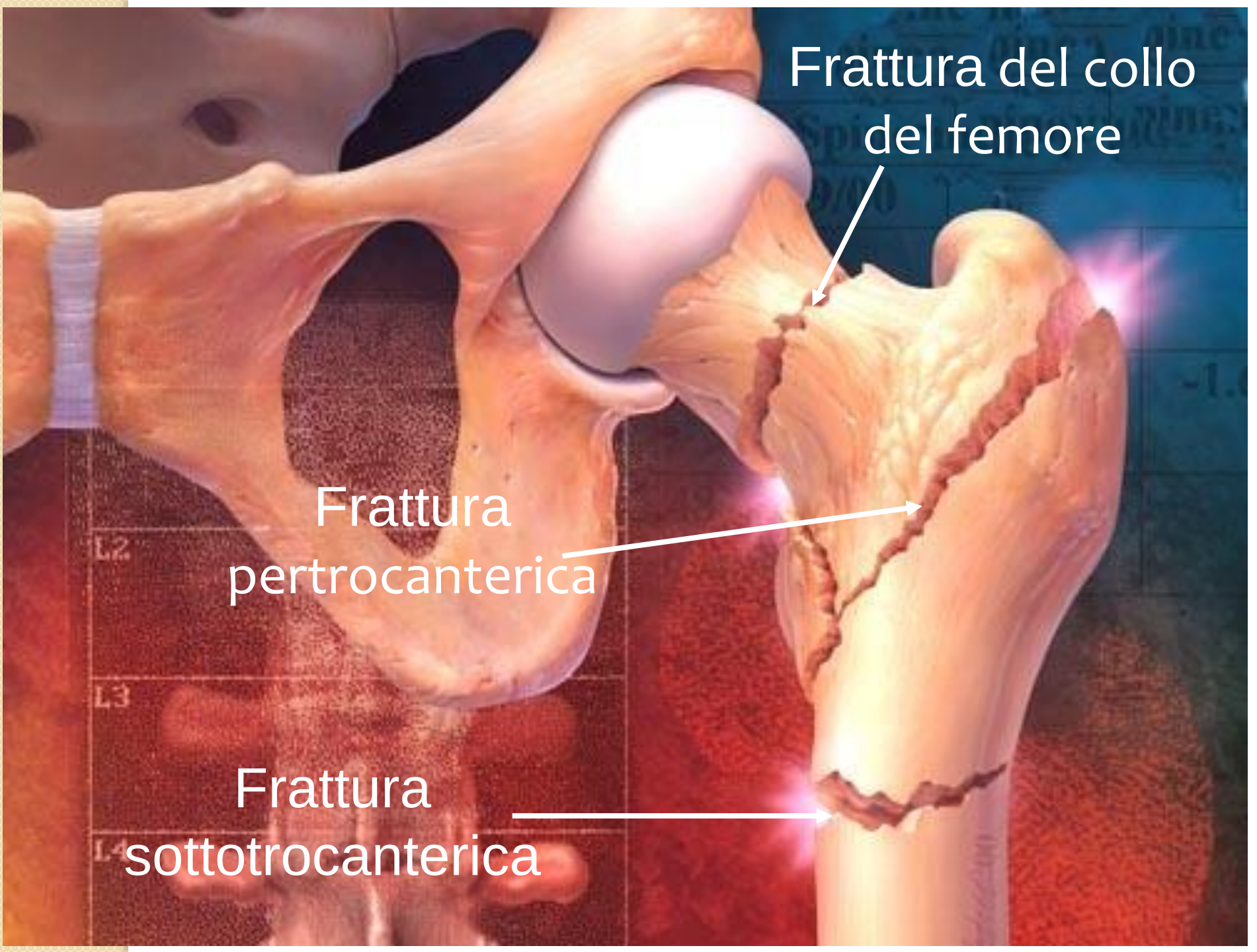
Bull World Health Organ 2003

"A FRACTURE CASCADE"

Hip fracture index condition of fraility fractures



L.J. Melton, S. Amin BoneKEy Reports (2013)


Frattura del collo del femore
Frattura pertrocanterica
Frattura sottotrocanterica

OUTCOMES

- **20% DISABILITY IN AMBULATION**

  Osteoporosis in the European Community: a call for action. IOF 2002

- **60% NOT RETURN TO THE PREVIOUS LEVEL OF INDIPENDENCE**

  Physician's Guide to Prevention and Treatment Osteoporosis. Washington DC, 2008

- **10% INABLE TO RETURN THEIR PREVIOUS RESIDENCE**

  Handoll HHG. Et al.*" Interventions for improving mobility after hip fracture surgery in adults"*. Cochrane Database of Systematic Reviews 2011

- **FROM 10% TO 20% ONE YEAR MORTALITY**

  Abrahamsen B. et al Excess mortality following hip fracture: a systematic epidemiological review. Osteoporos Int. 2009

INTERVENTO FISIOTERAPICO

- **Mobilisation is a major component of post-operative care**
  Handoll HHG. Et al.*" Interventions for improving mobility after hip fracture surgery in adults"*. Cochrane Database of Systematic Reviews 2011

- **Offer patients a physiotherapy assessment and, unless medically or surgically contraindicated, mobilisation on the day after surgery.**
  The management of hip fracture in adults. NICE 2011

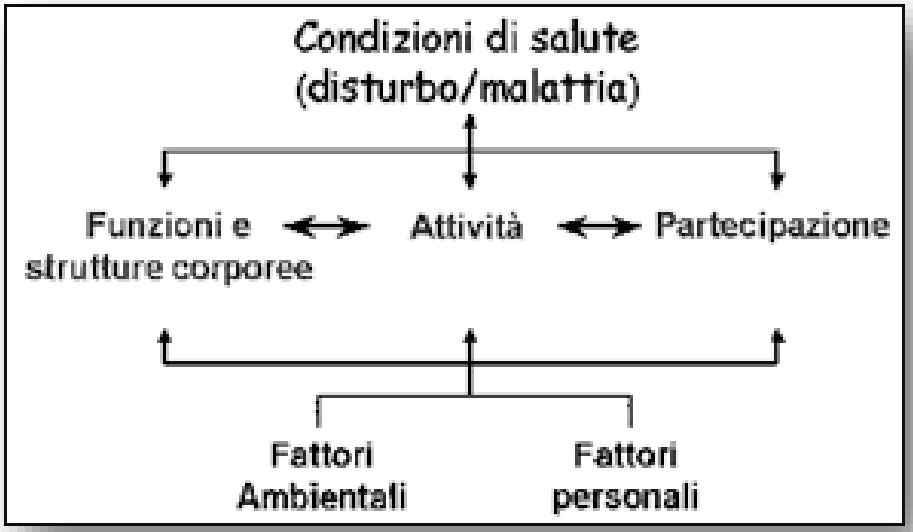
- **Offer patients mobilisation at least once a day and ensure regular physiotherapy review**
  The management of hip fracture in adults. NICE 2011

- **Patients should be offered a coordinated multidisciplinary rehabilitation program with the specific aim of regaining sufficient function to return to their prefracture living arrangements**
  Jenson et al. **"***Evidence – based guidelines for the managment of HF in old person: an update"* MJA 2010

ICF

International Classification of Functioning, Disability and Health

(World Health Assembly – 2001)



- Approccio multiprospettico alla persona per la valutazione delle «componenti della salute»
- Esprime il grado di "*Funzionamento*" in relazione alle condizioni di salute
- Linguaggio comune per una presa in carico globale

frattura di femore

menomazioni strutturali limitazioni funzionali

Disabilità

FATTORI PERSONALI

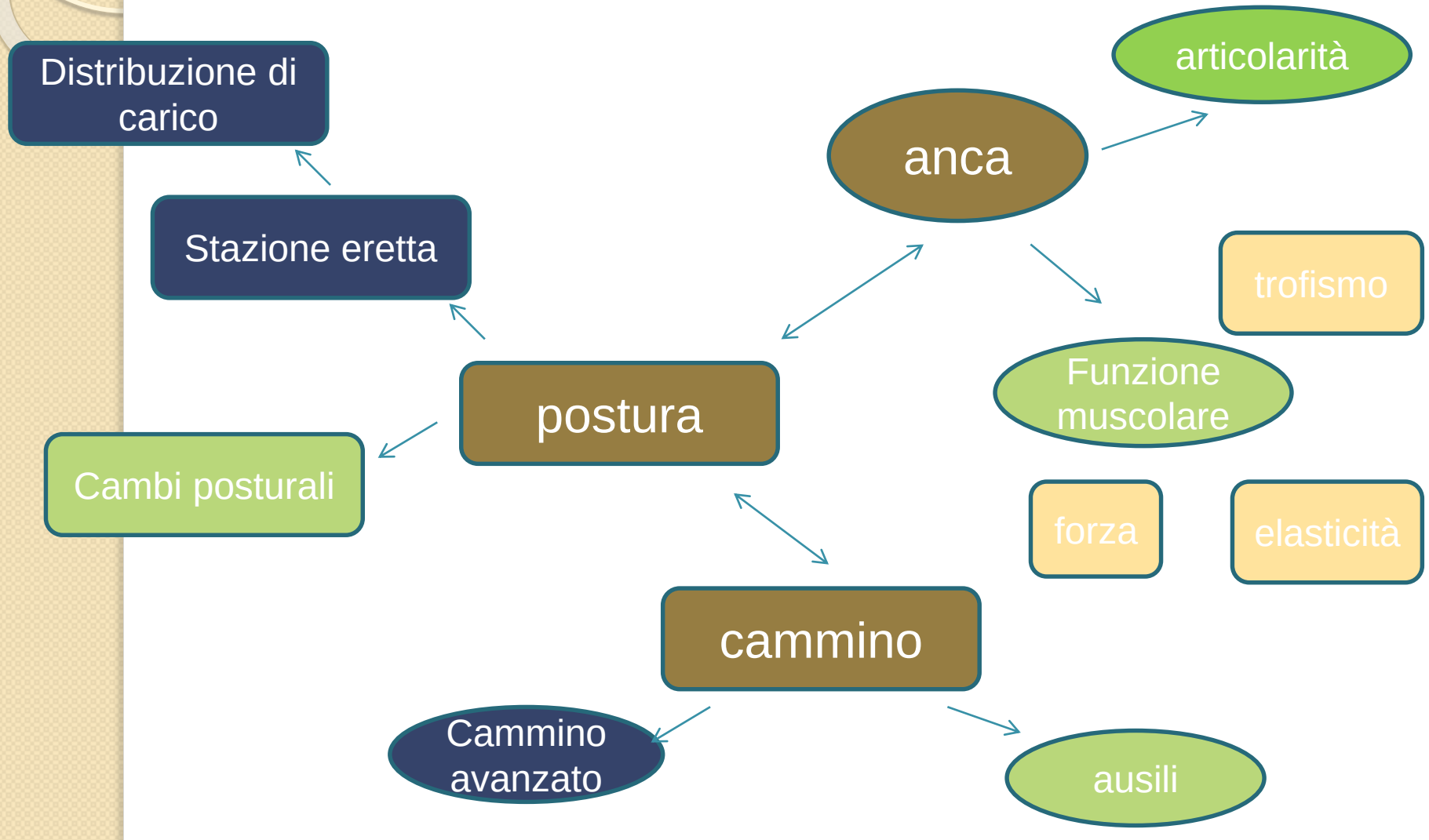
- Età ⇒ riduzione riserve funzionali e capacità di reagire ad eventi avversi
- Motivazione ……

FATTORI AMBIENTALI

- rete famigliare e sociale
- possibilità economiche
- ……

Salute nell'anziano ⇒ Perdurare dell'autosufficienza

RECUPERO FUNZIONALE



SEQUENZA INTERVENTO FISIOTERAPICO

VALUTAZIONE

- **stato funzionale premorboso**
- tipo frattura e intervento
- comorbilità
- **stato funzionale postoperatorio**
- dolore
- stato cognitivo
- vissuto emotivo
- collaborazione
- rete sociale

DIAGNOSI FUNZIONALE

INTERVENTO

- mobilizzazione segmentaria passiva e attiva assitita
- rinforzo muscolare in catena cinetica aperta e chiusa
- training dei passaggi posturali
- rieducazione all'allineamento e al carico in stazione seduta ed eretta
- training del passo
- esercizi di equilibrio
- rieducazione alle ADL
- training di resistenza
- ……

FASI DELL'INTERVENTO

T	FASE	OBIETTIVO SPECIFICO
1 – 7 gg post	ACUTA	Recupero range articolare
		Prevenzione complicanze e controllo dolore
		Recupero forza muscolare
		Avvio riorganizzazione propriocezione
		Mantenimento ADL residue
		Verticalizzazione precoce e cammino
8° g – 2/4 sett	INTERMEDIA	Rinforzo massimale
		Recupero completo range
		Miglioramento cammino
		recupero equilibrio
		Recupero ADL
+ 4 sett	ESITI	Tutti gli obiettivi precedenti, max equilibrio
		Resistenza
		Raggiungimento stato funzionale premorb

MODALITA' DI INTERVENTO: L'ESERCIZIO

CARATTERISTICHE DELL'ESERCIZIO

- obiettivi
- contenuti
- intensità
- durata

L'ESERCIZIO : QUALI EVIDENZE DI EFFICACIA?

Cochrane Library

Interventions for improving mobility after hip fracture surgery in adults (Review) **Handoll et al**

Objectives

To evaluate the effects of different interventions for improving mobility after hip fracture surgery in adults…. This review continues to **focus on mobilisation strategies**. Trials testing interventions, including multi-component interventions, aimed at enhancing activities of daily living and other aspects of functioning rather than specifically mobilisation are not included here.

Results

19 trials (involving 1589 older adults); twelve trials evaluated mobilisation strategies started soon after hip fracture surgery, seven trials evaluated strategies started after hospital discharge.

L'ESERCIZIO : QUALI EVIDENZE DI EFFICACIA?

Intervento in fase acuta	risultati
Two-week weight-bearing exercise programme versus nonweight -bearing exercise programme	+
Quadriceps training programme versus conventional physiotherapy alone	+
Electrical stimulation (pain alleviation) versus placebostimulation	+
Early assisted ambulation (within 48 hours)	+/-
Electrical stimulation of the quadriceps versus no or placebo stimulation (2 trials)	+ -
Intensive physiotherapy regimen versus standard physiotherapy (2 trials)	
Treadmill gait retraining programme versus conventional gait retraining	
Weight bearing at two weeks versus 12 weeks after internal fixation of an intracapsular hip fracture	

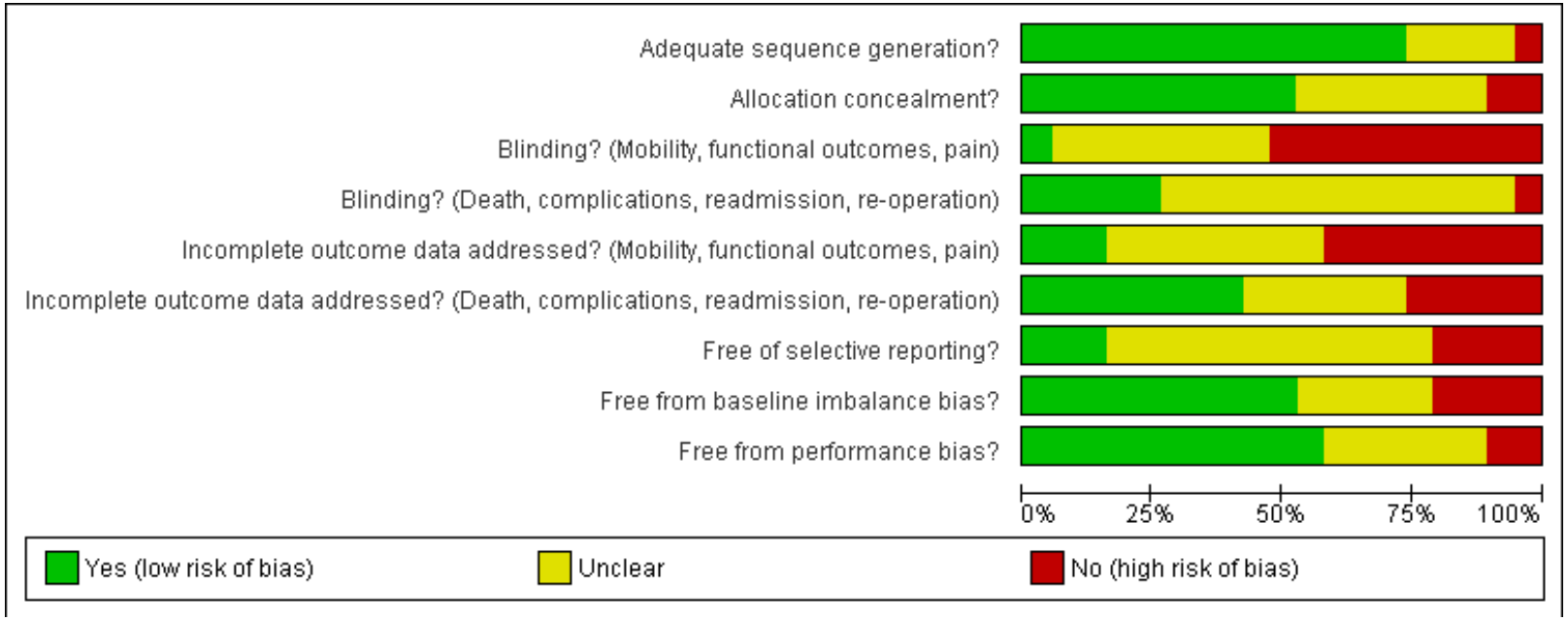
L'ESERCIZIO : QUALI EVIDENZE DI EFFICACIA?

Intervento in fase subacuta e di esiti	risultati
12 week intensive physical training versus placebo activities after discharge from inpatient rehabilitation	+
Resistance training for 12 weeks versus attention control	+
3 months, delivered in eight sessions, of a home-based individualised physical therapy programme versus unsupervised home exercise on discharge from an acute ward	+
6 months of supervised intensive physical therapy and exercise training versus home exercise after completion of standard therapy	+
12 month programme of trainer-led exercise sessions with or without motivational interventions versus usual care (no intervention) after completion of standard rehabilitation	+
3 months of home-based high intensity resistance versus aerobic exercise training versus education control group after completion of usual physical therapy	
4 month of home-based exercise programme (either weight or nonweight-bearing exercises) versus control	
Resistance training for 12 weeks versus resistance training for 12 weeks plus nutritional supplementation for six weeks versus attention control	
Weight-bearing exercise twice daily for 60 minutes per day for 16 weeks versus usual care (mainly non-weight bearing exercise for 30 minutes per day)	
1 month of home-based weight-bearing exercises started seven months after hip fracture versus usual care (no specific instructions)	

L'ESERCIZIO : QUALI EVIDENZE DI EFFICACIA?

Cochrane Library

Interventions for improving mobility after hip fracture surgery in adults (Review) Handoll et al



L'ESERCIZIO : QUALI EVIDENZE DI EFFICACIA?

Cochrane Library

Interventions for improving mobility after hip fracture surgery in adults (Review) **Handoll et al**

Author's conclusions

…. Many of the trials had weak methods, including inadequate follow-up. There was no pooling of data because no two trials were sufficiently alike……..

In summary, the review found **there was not enough evidence to determine which are the best strategies**, started in hospital or after discharge from hospital, for helping people walk and continue walking after hip fracture surgery.

FRATTURA DI FEMORE E DEMENZA

- "…….. it is notable that 13 trials, including all seven post-discharge intervention trials, excluded people with various levels of cognitive impairment"

Interventions for improving mobility after hip fracture surgery in adults
Handoll et al 2011 Cochrane Review

19.2% of people with hip fracture meet formal diagnostic criteria for dementia and 41.8% are cognitively impaired

Seitz DP.
Prevalence of dementia and cognitive impairment among older adultswith hip fractures.
Journal of the American Medical DirectorsAssociation 2011

Conclusion:

One in 3 patients with hip fractures have concomitant cognitive impairment, yet 8 of 10 hip fracture trials excluded or ignored this population. The ambiguity or exclusion of these patients misses an opportunity to study outcomes and identify factors associated with improved prognosis

Mundi S.
Syst. Rev.on the inclusion of patients with cognitive impairment in hip fracture trials: a missed opportunity
Can J Surgery 2014

TASK- ORIENTED APPROACH

Anziani Fragili

….." We appraised 13 trials of functional training in this review and the results support the specificity of training principle; that is, **the best gains in performance are achieved when the training closely mimics the performance**. Therefore, **functional training may be a better option than muscle strength training alone if the goal is to reduce ADL disability in older adults**"

Chiun-ju Liu et al. ***Systematic review of functional training on muscle strength, physical functioning, and activities of daily living in older adults***

Eur Rev Aging Phys Act (2014)

TASK - ORIENTED APPROACH

"No two functional training programs were alike.

Eight trials included a **strength training component** and five trials included a **balance component in functional training**. The majority of the trials included **mobility exercises in functional training**. Nine trials included **chair stand exercises**, seven trials included **stair climbing exercises**, and five trials included **walking exercises**. **Some trials used daily tasks as a medium of training**"

Durata di ogni intervento: 12 settimane (alcuni solo 6 settimane)

Durata di ogni sessione: 45/60 min

Frequenza: 2/3 volte a settimana

Chiun-ju Liu et al.

Systematic review of functional training on muscle strength, physical functioning, and activities of daily living in older adults *Eur Rev Aging Phys Act*

TAKE HOME MESSAGES

- la frattura di femore in età anziana è una vera emergenza sanitaria
- la riabilitazione motoria è una componente fondamentale del protocollo di cura nel post operatorio
- l'intervento ft applica il modello bio-psico-sociale dell'ICF
- l'intervento ft inizia dalla fase acuta e prosegue in quella subacuta e degli esiti, seguendo il paziente anche molti mesi e in diversi setting
- la letteratura, al momento, non è in grado di indicare per l'esercizio ft contenuti, timing, durata e intensità più efficaci per il raggiungimento degli obiettivi
- L'utilizzo di un approccio *task oriented* potrebbe essere utile, in particolare con i pazienti che hanno un deterioramento cognitivo associato

GRAZIE PER L’ATTENZIONE