PHỤC HỒI CHỨC NĂNG MẤT CƠ Ở NGƯỜI CAO TUỔI



Ths Huỳnh Thị Đan Thanh Bộ môn CTCH-PHCN

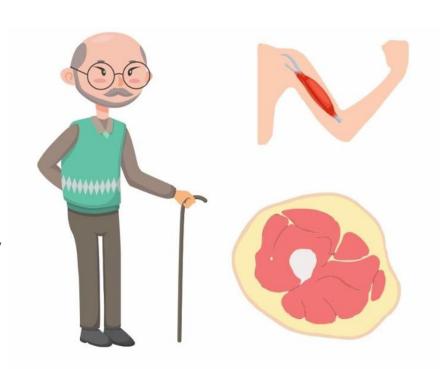
NỘI DUNG



- Sinh lí bệnh và YTNC sự mất cơ
- Chẩn đoán mất cơ
- Quản lí và phòng ngừa mất cơ CT

GIỚI THIỆU

- Sarcopenia (Mất cơ) Greek words
 - "sarco": flesh
 - "penia": reduced or deficiency
- 1988 by Irwin Rosenberg (New Mexico): muscle wasting of the older people
- Prevalence: 9.9 40.4% (older community-dwelling adults)





DICH TĒ

Sarcopenia in some Asian countrie

Country/Region (Author, Year) ^{ref}	Muscle Mass Measurement	Age Cutoff, y	Sample Size	Prevalence, %		
				Total	Men	Women
Japan (Yoshimura, 2017) ¹²	DXA	60	1099	8.2	8.5	8.0
Japan (Momoki, 2017) ^{S1}	BIA	65	186	NR	NR	21.0
Japan (Iwasaki, 2017) ^{S2}	BIA	75	272	25.7	NR	NR
China (Wang, 2018) ^{S3}	BIA	60	948	7.1	6.6	7.5
China (Hai, 2017) ^{S4}	BIA	60	834	10.6	11.3	9.8
China (Yu, 2014) ¹⁵	DXA	65	4000	7.3	9.4	5.3
Japan (Tanishima, 2017) ^{S5}	BIA	40	216	5.5	6.3	5.1
China (Han, 2017) ^{S6}	BIA	60	711	10.8	8.3	13.3
Hong Kong (Woo 2015) ¹⁴	DXA	65	2000	9.4	9.4	NR
China (Hai, 2017) ^{S7}	BIA	60	836	10.5	11.3	9.7
China (Hu, 2017) ^{S8}	DXA	60	607	18.5	16.3	19.9
China (Wang, 2016) ^{S9}	BIA	60	1090	12.0	14.0	10.2
Taiwan (Kuo, 2019) ^{S10}	DXA	60	731	6.8	9.3	4.1

DXA, dual X-ray absorptiometry; BIA, bioelectrical impedance analysis; NR, not reported.

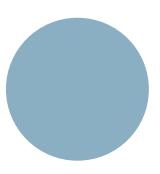




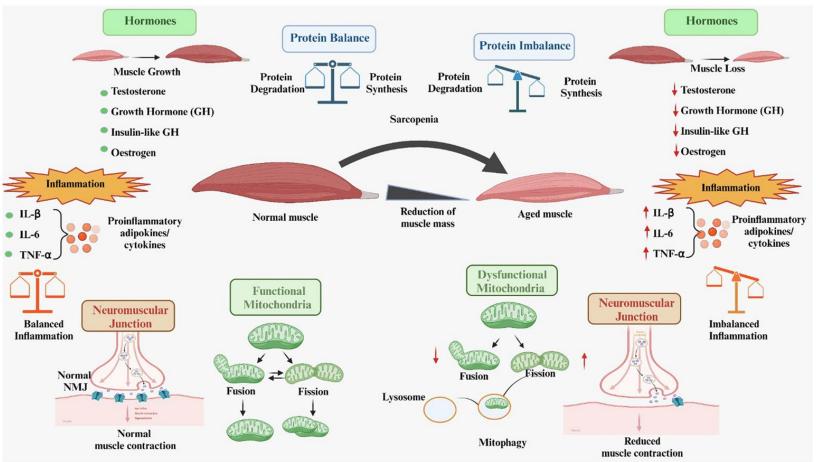
Hệ quả của mất cơ

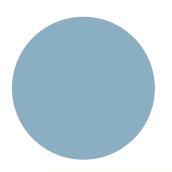
- Increased risk of mortality and other adverse outcomes such as falls, functional dependency, hospital admission and a reduced QoL
- SR and meta-analysis (43 observational studies)
 Người sarcopenia có điểm HRQoL thấp hơn đáng kể,
 SMD là -0.76 (95% CI: -0.95 đến -0.57)
- Sarcopenia ảnh hưởng rất đáng kể đến QoL





SINH LÍ BỆNH





SINH LÍ BỆNH

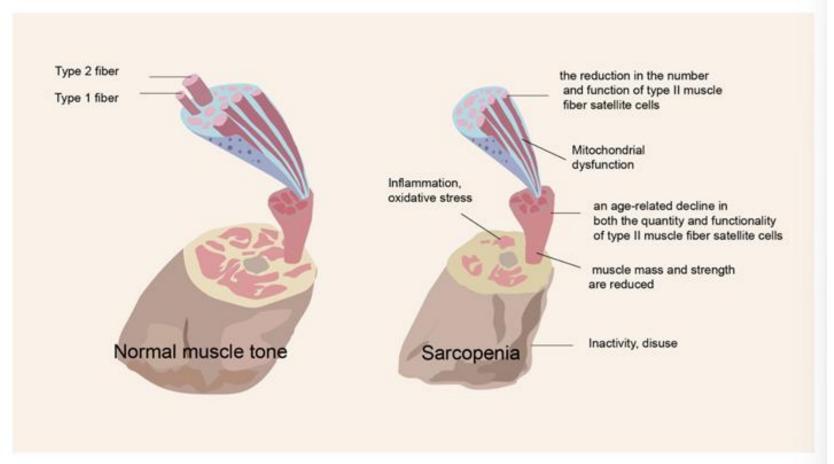


Figure 3 Aging-induced loss of muscle mass and degeneration of muscle fibers.



PHÂN LOẠI MẤT CƠ

Phân loại Sarcopenia theo nguyên nhân

Primary sarcopenia

Age-related sarcopenia

No other cause evident except ageing

Mất cơ nguyên phát

Secondary sarcopenia

Activity-related

sarcopenia

Disease-related

sarcopenia

Nutrition-related

sarcopenia

Can result from bed rest, sedentary lifestyle,
deconditioning or zero-gravity conditions
Associated with advanced organ failure
(heart, lung, liver, kidney, brain), inflammatory
disease, malignancy or endocrine disease
Results from inadequate dietary intake of energy
and/or protein, as with malabsorption, gastrointestical
disorders or use of medications that cause anorexia

Mất cơ thứ phát

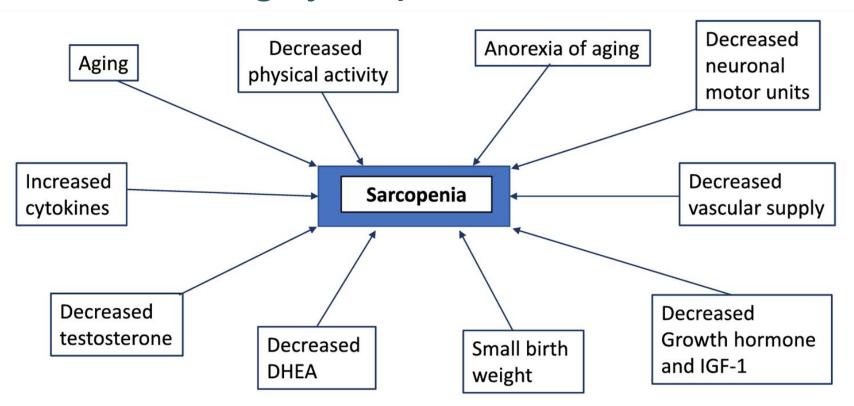
- Liên quan hoạt động
- Liên quan bệnh lí
 - Liên quan dinh dưỡng



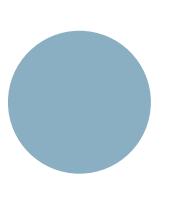


Những yếu tố liên quan tới bệnh sinh

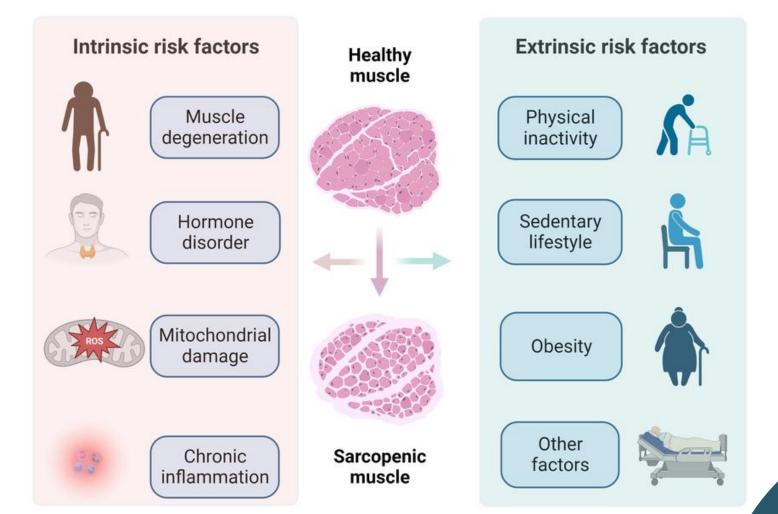
Mất cơ nguyên phát







Yếu tố nguy cơ Mất cơ

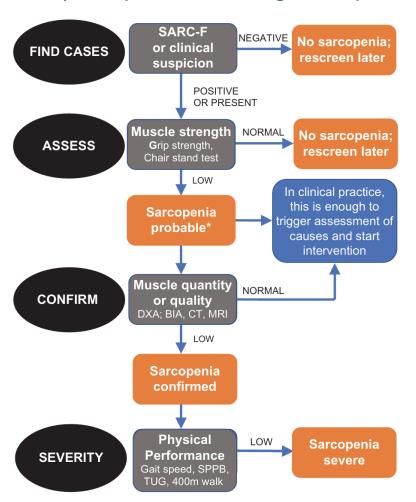




CHẨN ĐOÁN MẤT CƠ

Nhóm công tác châu Âu về sarcopenia ở người cao tuổi, 2019

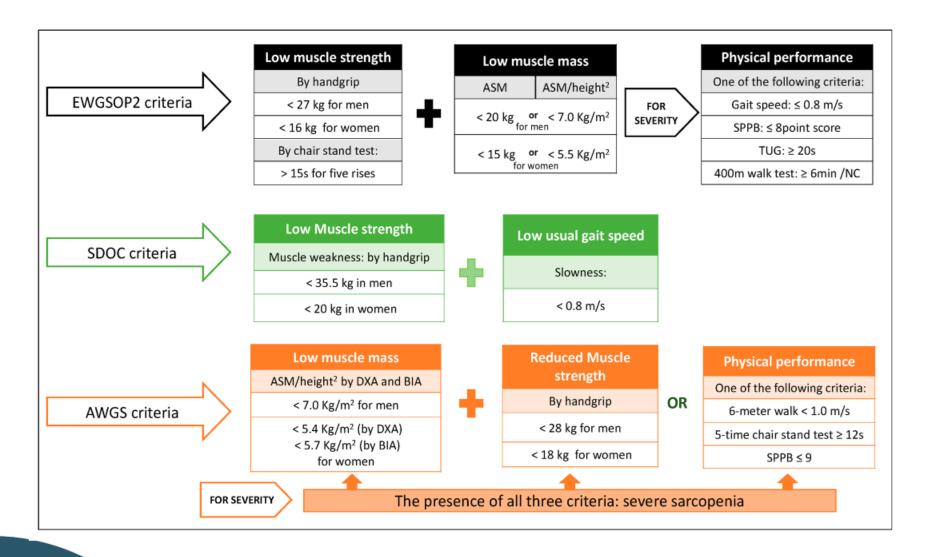
(European Working Group on Sarcopenia in Older People - EWGSOP)



Component	Question	Scoring
Strength	How much difficulty do you have	None = 0
	in lifting and carrying 10 pounds?	Some = 1
		A lot or unable = 2
Assistance in walking	How much difficulty do you have	None = 0
	walking across a room?	Some = 1
		A lot, use aids, or unable = 2
Rise from a chair	How much difficulty do you have	None = 0
	transferring from a chair or bed?	Some = 1
		A lot or unable without help = 2
Climb stairs	How much difficulty do you have	None = 0
	climbing a flight of 10 stairs?	Some = 1
		A lot or unable = 2
Falls	How many times have you fallen	None = 0
	in the past year?	1 – 3 falls = 1
		≥ 4 falls = 2



So sánh các hướng dẫn chẩn đoán



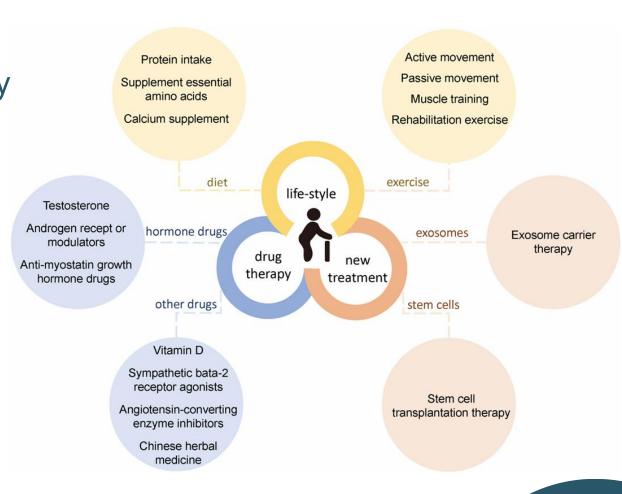




QUẢN LÍ MẤT CƠ

Nguyên tắc: toàn diện, lấy BN làm trung tâm bởi 1 nhóm đa chuyên ngành

- Lối sống: exercise và dinh dưỡng
- Thuốc
- Phương pháp mới





QUẢN LÍ MẤT CƠ



Journal of Cachexia, Sarcopenia and Muscle 2023; **14**: 1199–1211 Published online 14 April 2023 in Wiley Online Library (wileyonlinelibrary.com) **DOI:** 10.1002/jcsm.13225

Exercise for sarcopenia in older people: A systematic review and network meta-analysis

Yanjiao Shen^{1,3}, Qingyang Shi², Kailei Nong², Sheyu Li², Jirong Yue³, Jin Huang¹, Birong Dong³, Marla Beauchamp⁴ & Qiukui Hao^{3,4}* D

¹Medical Device Regulatory Research and Evaluation Center, Chinese Evidence-Based Medicine Center, West China Hospital, Sichuan University, Chengdu, Sichuan University, Chengdu, Sichuan University, Chengdu, Sichuan, China; ³The Center of Gerontology and Geriatrics/National Clinical Research Center of Geriatrics, West China Hospital, Sichuan University, Chengdu, Sichuan, China; ⁴School of Rehabilitation Science, McMaster University, Hamilton, Ontario, Canada

Conclusions In older adults with sarcopenia, high or moderate certainty evidence showed that resistance exercise with or without nutrition and the combination of resistance exercise with aerobic and balance training were the most effective interventions for improving quality of life. Adding nutritional interventions to exercise had a larger effect on handgrip strength than exercise alone while showing a similar effect on other physical function measures.





VD chương trình tập cho Mất cơ



Intensity: 50-70% 1RM Volume: Light aerobic activity: walking, cycling, or 10 exercises per session (rest 3' be*) Dynamic stretching: arm circles, leg swings 2 sets per exercise (rest 2' 10 repetitions per set **Exercises:** Leg press, squat, leg extension, leg curl, leg Warm-up abduction/adduction, calf (10')chest press, seated row, butterfly with extended arms, back extension Resistance exercise Structured (30')Exercise Flexibility & Cool-down RE or AE Session (10')Sarcopenia (60'-70') Aerobic exercise (20')Intensity: 5 RPE Balance 30 min/day at training (20') moderate intensity (bouts of ≥10 min) Modality: *be: between exercises

Treadmill, cycle

ergometer, walking,

swimming, dancing

**bs: between sets





Intensity: 3 RPE Volume:

20 min/session (rest 3' be)

Exercises:

Feet together stance, tandem stand, weight shifts, one-leg stand



VD chương trình tập cho Mất cơ nặng





Intensity: Slow movement, mild discomfort Volume:

3 sets of 15 sec each (rest 1' be*)

Exercises:

Hamstrings, quadriceps, calf stretches

Shoulder and back mobility drills



Flexibility &

Cool-down

(10')

Light aerobic activity: slow walking, seated Gentle joint mobility exercises (shoulder rolls, ankle circles)



Structured Exercise Session

Severe Sarcopenia (50'-55')

Intensity: 30-60% 1RM Volume:

8 exercises per session

- (rest 5' be*)
- 2 sets per exercise (rest 3'
- 8 repetitions per set

Exercises:

Squat, leg extension, leg curl, leg abduction/adduction, calf

chest press, seated row, butterfly with extended arms, back extension, chair-based exercises***



Resistance exercise (20')

> Aerobic exercise (15')



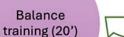


Intensity: 3 RPE Volume:

20 min/session (rest 5' be*)

Exercises:

Heel and toe raises, static balance





Volume:

30 min/day at low intensity (bouts of ≥10 min)

Modality:

RE or AE

Treadmill, cycle ergometer, walking, dancing

*be: between exercises

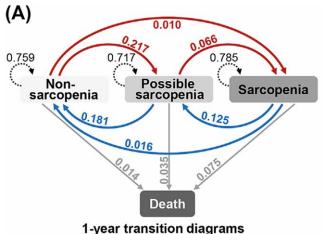
**bs: between sets

*** for those with mobility limitations



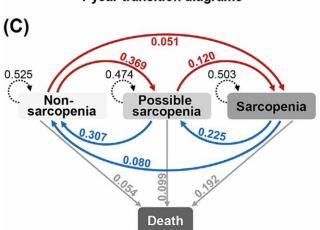
Can sarcopenia be a

reversible condition?

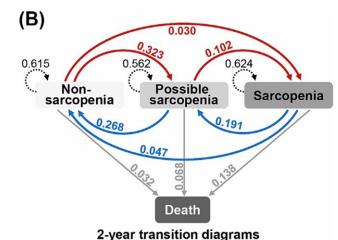


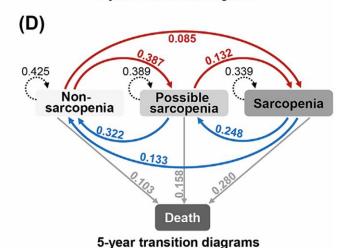
>4000 người

> 3 năm



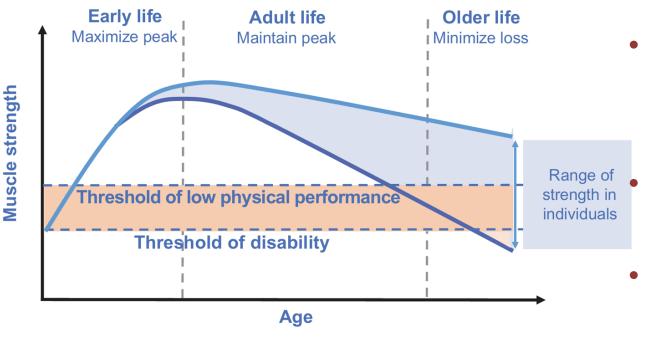
3-year transition diagrams







Cách tiếp cận dựa trên vòng đời để phòng ngừa sarcopenia



maximise muscle inyouth and youngadulthoodmaintain muscle inmiddle age

minimise loss in

older age





TAKE HOME MESSAGES

- Mục tiêu chính: giảm nhẹ hoặc đảo ngược suy giảm khối cơ và chức năng
- "Possible sarcopenia" = giai đoạn vàng để can thiệp sớm

Tiếp cận PHCN đa mô thức, cá thể hóa và làm việc theo nhóm.

Exercise is medicine

Resistance training là nền tảng, kết hợp tập thăng bằng, aerobic và dinh dưỡng để tối ưu hiệu quả



