



# I JORNADA SEOM EJERCICIO FÍSICO Y CÁNCER

**17 DE JUNIO DE 2024**

Meeting Place. Paseo de la Castellana, 81. Madrid

**Efectos del Ejercicio Físico sobre las toxicidades derivadas de los tratamientos oncológicos**

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SEOM  
Sociedad Española  
de Oncología Médica

Fundación  
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GRUPO DE TRABAJO SEOM DE  
*ejercicio y*  
CÁNCER

## 2015, Strategic Priorities



## NATIONAL CANCER INSTITUTE Community Oncology Research Program (NCORP)

Symptom Management and Health-Related Quality of Life  
Steering Committee (SxQoLSC)

## 2019, Exercise Guidelines for Cancer Survivors: Consensus statement from International Multidisciplinary Roundtable

American College of Sports Medicine (ACSM) <sup>*, †</sup>	Exercise and Sports Science Australia <sup>*, †</sup>
American Cancer Society (ACS) <sup>*, †</sup>	German Union for Health Exercise and Exercise Therapy (DVGS) <sup>*, †</sup>
American Academy of Physical Medicine and Rehabilitation (AAPMR) <sup>*, †</sup>	MacMillan <sup>*, †</sup>
American Physical Therapy Association (APTA) <sup>*</sup>	National Cancer Institute (U.S.)
American Congress of Rehabilitation Medicine	National Comprehensive Cancer Network <sup>†</sup>
American College of Lifestyle Medicine <sup>†</sup>	Royal Dutch Society for Physical Therapy (KVDP) <sup>*, †</sup>
Canadian Society for Exercise Physiology <sup>*, †</sup>	Society for Behavioral Medicine <sup>†</sup>
Centers for Disease Control <sup>†</sup>	Sunflower Wellness <sup>*, †</sup>
Commission on Accreditation of Rehabilitation Facilities <sup>†</sup>	

Kleckner, et al. Oncol Hematol Rev. 2018;14(1).28–37  
Campbell, et al. Med Sci Sports Exerc. 2019;51(11).2375–2390

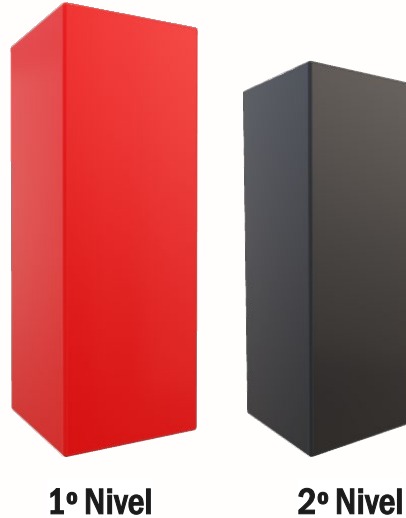


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## Symptom Management and Health-Related Quality of Life Steering Committee (SxQoLSC)





### Symptom Management and Health-Related Quality of Life Steering Committee (SxQoLSC)

- Fatiga
- Cardiotoxicidad
- Dolor
- Deterioro cognitivo
- Neurotoxicidad



1º Nivel

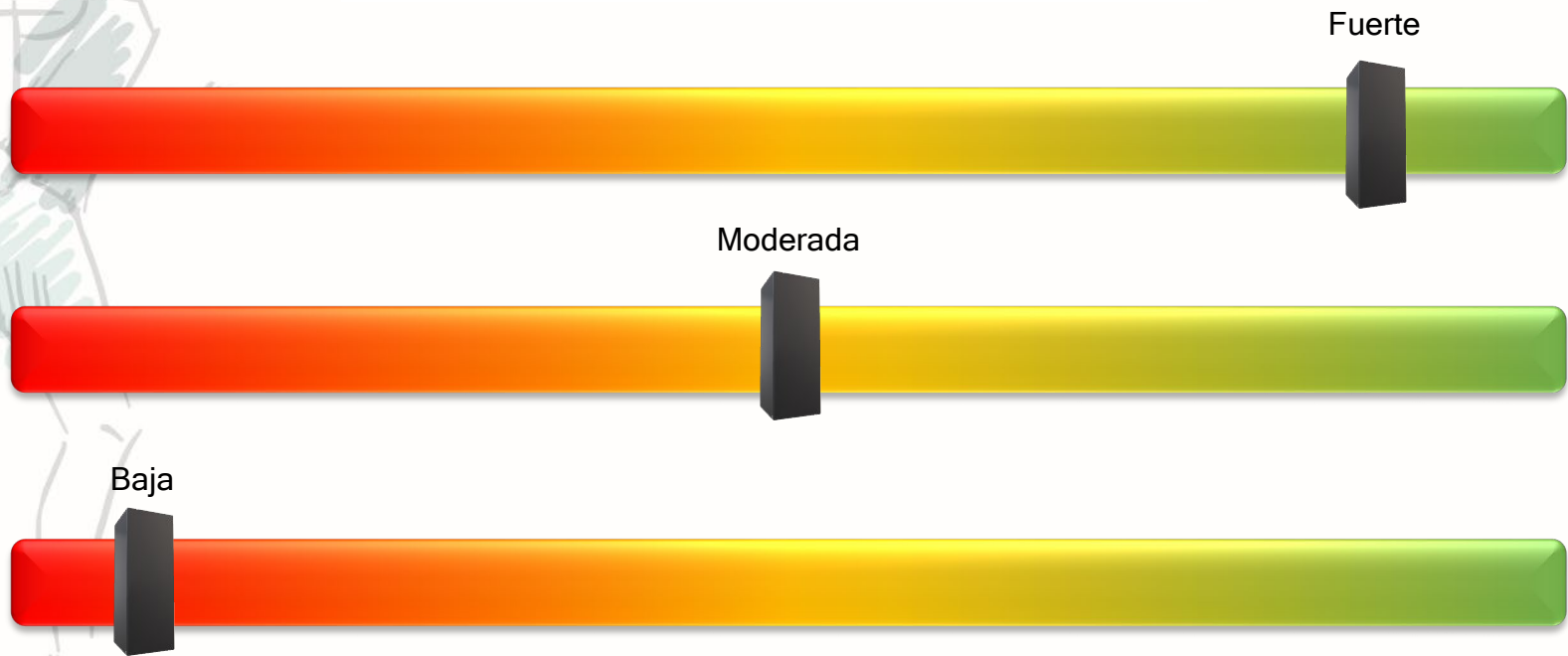


2º Nivel

- Trastornos del sueño
- Daño óseo
- Toxicidad metabólica (caquexia, resistencia a la insulina y DM2)
- Problemas psicológicos (ansiedad y depresión)



## Exercise Guidelines for Cancer Survivors: Consensus statement from International Multidisciplinary Roundtable



Baja

Moderada

Fuerte



#EjercicioContraelCáncer



Campbell, et al. Med Sci Sports Exerc. 2019;51(11).2375–2390





Fuerte



- Ansiedad
- Depresión
- Fatiga
- Linfedema\*
- Función física\*



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Campbell, et al. Med Sci Sports Exerc. 2019;51(11).2375–2390

Moderada



- Salud ósea
- Trastornos del sueño



Insuficiente



- Cardiotoxicidad
- Neuropatía periférica inducida por quimioterapia
- Función cognitiva
- Nauseas
- Dolor



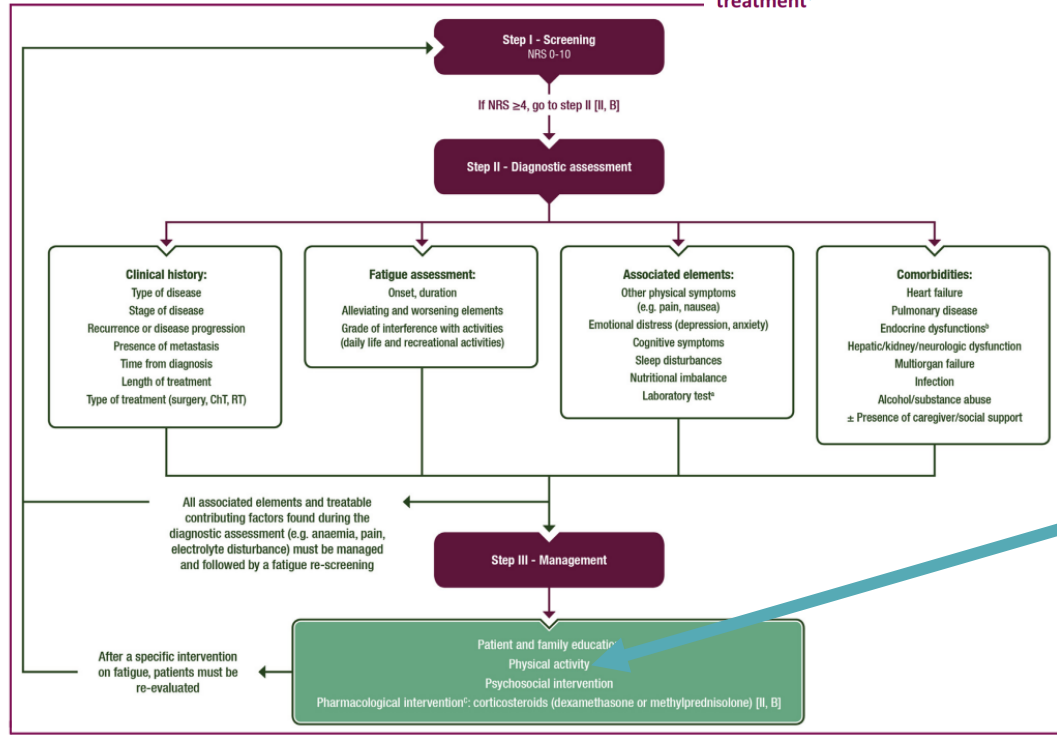
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# Fatiga



## Cancer-related fatigue: ESMO Clinical Practice Guidelines for diagnosis and treatment<sup>†</sup>

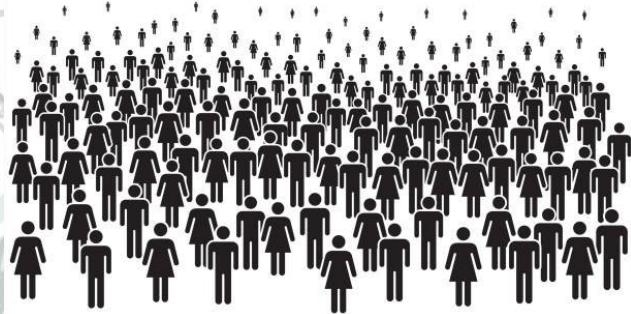


Actividad Física

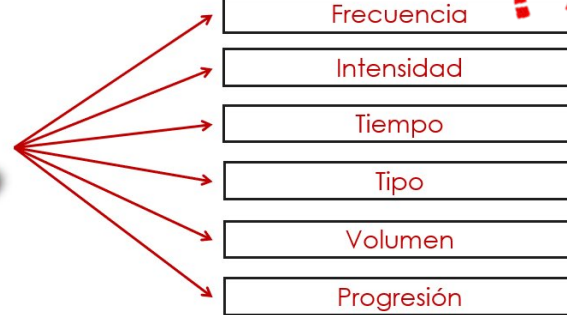
Fabi, et al. Annals of Oncology. 2020;31(6):713-723



## Effectiveness of exercise interventions in the management of cancer-related fatigue: a systematic review of systematic reviews



46 estudios con 107.061 pacientes



Zhang, et al. Supportive Care in Cancer. 2023;31(3).153

## Factores por los que el ejercicio puede disminuir la fatiga

Bienestar psicológico y aptitud física

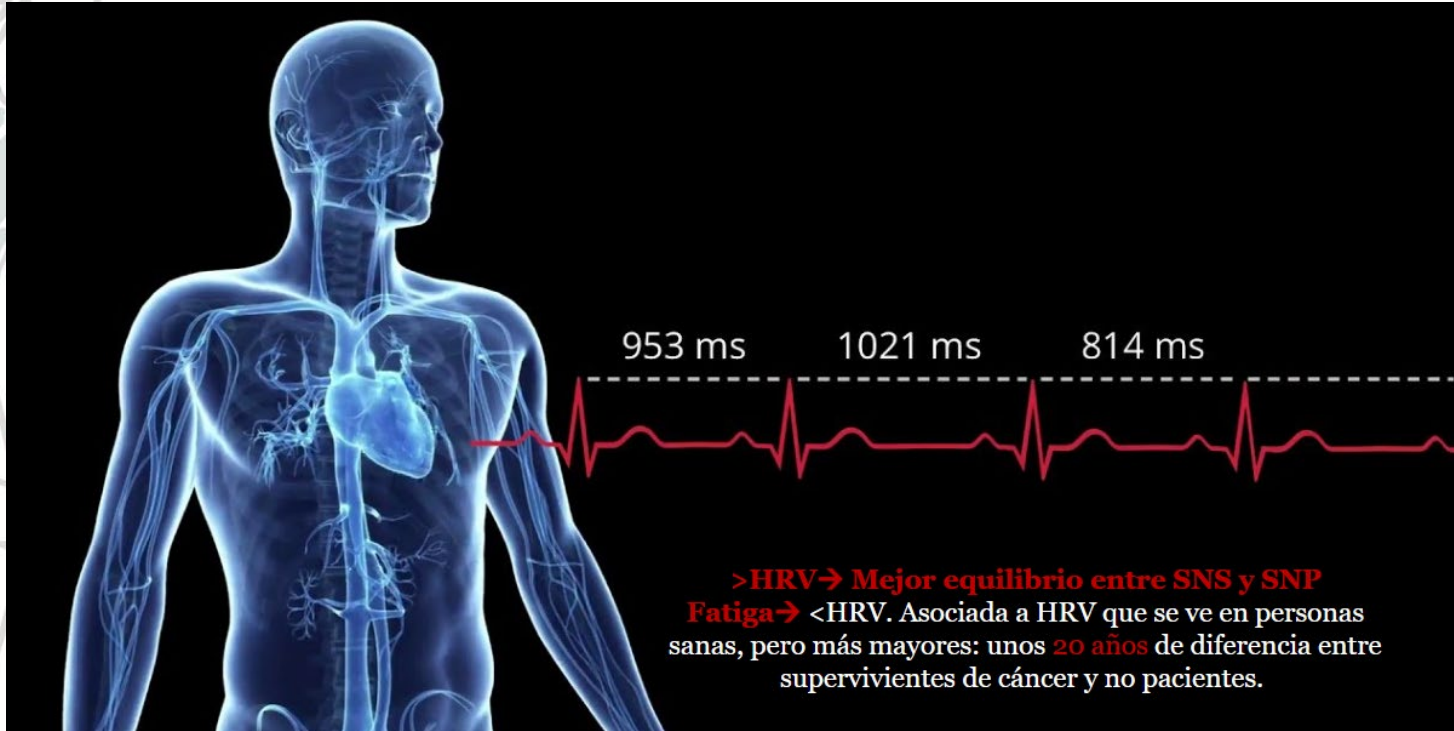
Efecto antiinflamatorio

Equilibrio del sistema nervioso autónomo

Factores neurotróficos



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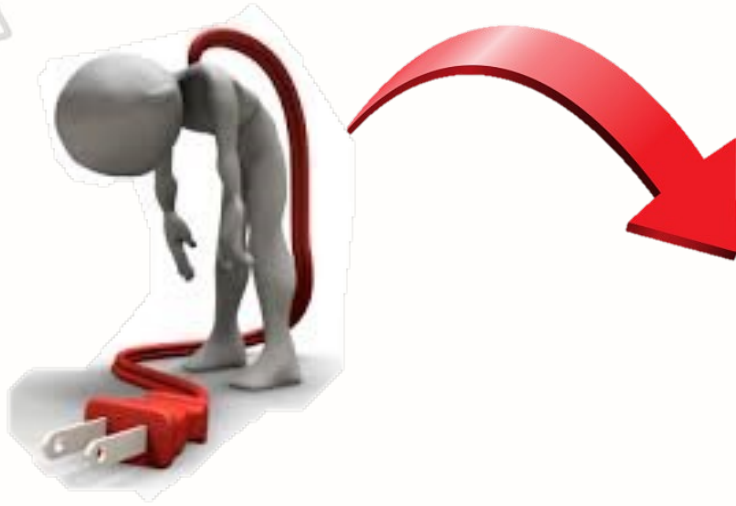


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## Exacerbated central fatigue and reduced exercise capacity in early-stage breast cancer patients treated with chemotherapy



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# Cardiotoxicidad



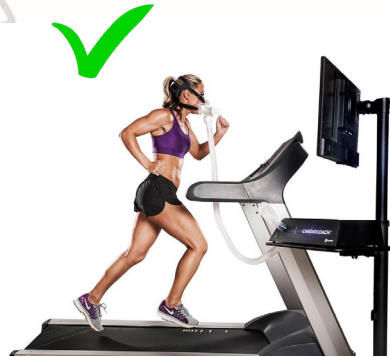
Management of cardiac disease in cancer patients throughout oncological treatment: ESMO consensus recommendations

**Long-term cancer survivors and exercise.** Numerous studies have demonstrated the therapeutic benefits of exercise during primary anticancer treatment.<sup>183,184</sup> It is recommended during anticancer treatment, but can also improve physical functioning, fatigue and quality of life (QoL).<sup>185</sup> Some studies have also suggested that physical activity may even increase the rate of completion of ChT.<sup>186</sup> Exercise has been shown to improve CV fitness, muscle strength, body composition, fatigue, anxiety, depression and overall QoL in cancer survivors. Based on current guidelines, patients undergoing anticancer therapy and long-term cancer survivors should be encouraged to exercise at least 150 minutes per week.<sup>187</sup>



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# Cardiotoxicidad



2024

The efficacy and safety of exercise regimens to mitigate chemotherapy cardiotoxicity: a systematic review and meta-analysis of randomized controlled trials



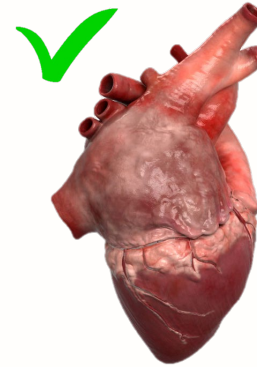
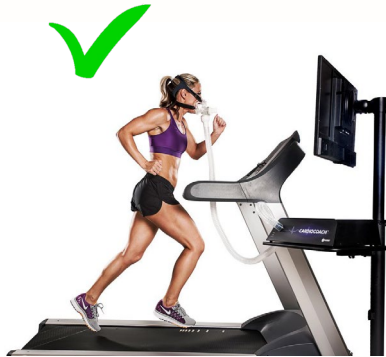
Parámetros ecocardiográficos y resultados de supervivencia (fracción de eyección del ventrículo izquierdo, tensión longitudinal global, gasto cardíaco, volumen sistólico, volumen telediastólico del ventrículo izquierdo, volumen telesistólico del ventrículo izquierdo, relación E/A, frecuencia cardíaca en reposo, frecuencia cardíaca máxima, presión arterial sistólica en reposo y diastólica en reposo, eventos adversos y mortalidad).



#EjercicioContraelCáncer



# Cardiotoxicidad



Mejorar o mantener la fracción de eyección del ventrículo izquierdo

REVIEW ARTICLE

2024

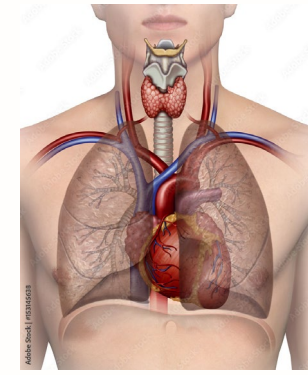
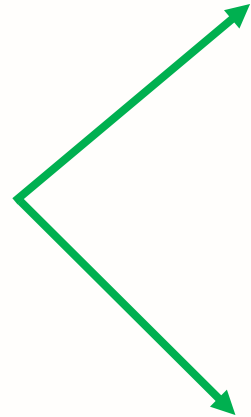
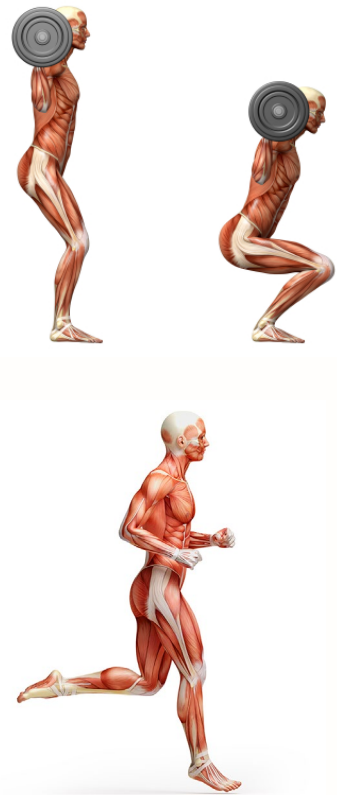
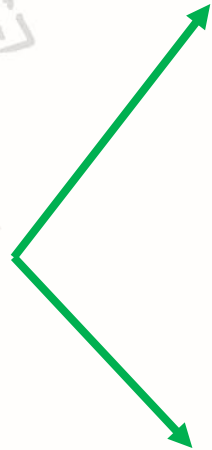
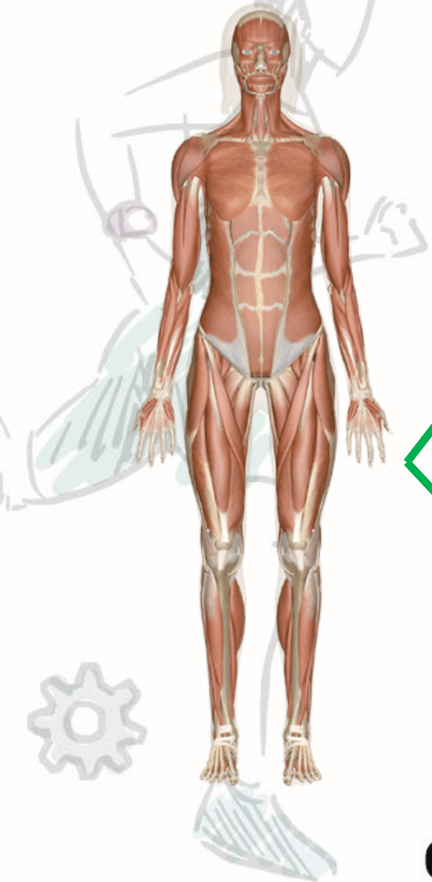
Exercise Interventions for the Prevention and Treatment of Anthracycline-Induced Cardiotoxicity in Women with Breast Cancer: A Systematic Review



#EjercicioContraelCáncer

# Cardiotoxicidad

Therapeutic effects of aerobic and resistance exercises for cancer survivors: a systematic review of meta-analyses of clinical trials



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Fuller, et al. British journal of sports medicine. 2018;1311-1311

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## Adult Cancer Pain, Version 3.2019

### Adult Cancer Pain

#### INTEGRATIVE INTERVENTIONS

Consider integrative interventions in conjunction with pharmacologic interventions as needed. Integrative interventions may be especially important in vulnerable populations (eg, frail, elderly) in whom standard pharmacologic interventions may be less tolerated or based on patient preference. The utility of integrative interventions underscores the necessity for pain management to be carried out with a team approach that contains a wide range of treatment options. (See PAIN-L\*)

#### Pain likely to be relieved or function improved with cognitive, physical, or interventional modalities:

##### • Cognitive modalities

- ▶ Mindfulness-based stress reduction
- ▶ Imagery
- ▶ Hypnosis
- ▶ Biofeedback
- ▶ Acceptance-based training
- ▶ Distraction training
- ▶ Relaxation training
- ▶ Active coping training
- ▶ Graded task assignments, setting goals, pacing, and prioritizing
- ▶ CBT, cognitive restructuring
- ▶ Behavioral activation

##### • Spiritual care (See NCCN Guidelines for Distress Management†)

##### • Physical modalities

- ▶ Bed, bath, and walking supports
- ▶ Positioning instruction
- ▶ Instruction in therapeutic and conditioning exercise
- ▶ Energy conservation, pacing of activities
- ▶ Massage
- ▶ Heat and/or ice
- ▶ Transcutaneous electrical nerve stimulation (TENS)
- ▶ Acupuncture or acupressure
- ▶ Ultrasonic stimulation

##### • See Interventional Strategies (PAIN-M)

Swarm, et al. Journal of the National Comprehensive Cancer Network. 2019;17(8):977-1007

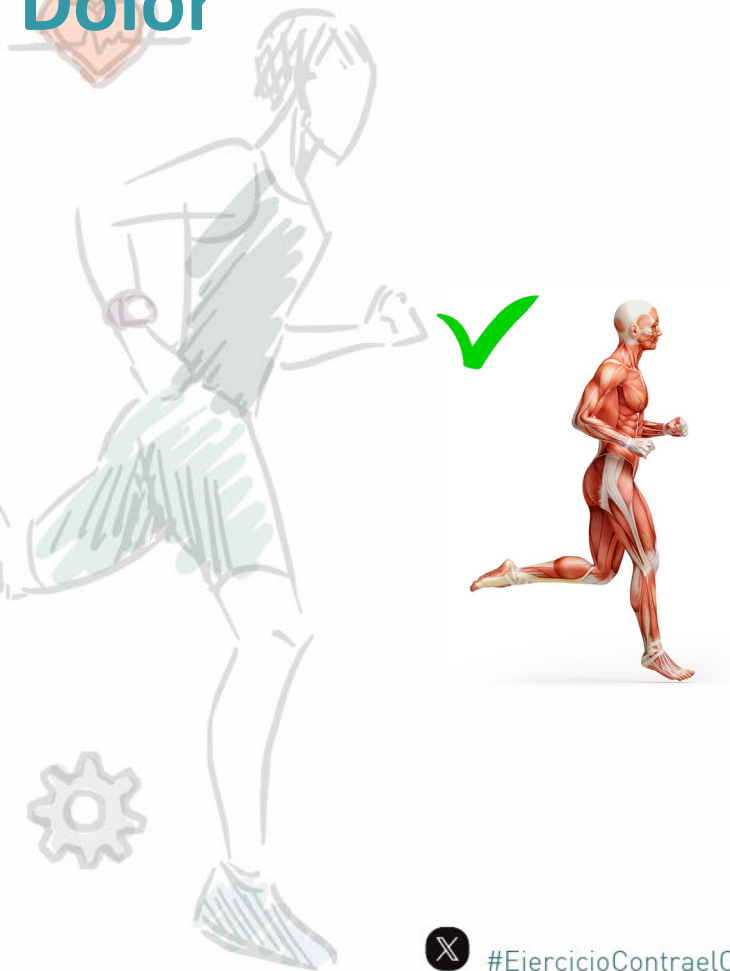




Intervenciones coadyuvantes tolerables y efectivas para reducir el dolor asociado al cancer.



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Reduce la intensidad y sensibilidad, pero los resultados son heterogéneos y se deben realizar más estudios de mayor calidad.



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Peters, et al. Supportive Care in Cancer. 2024;32(3).145

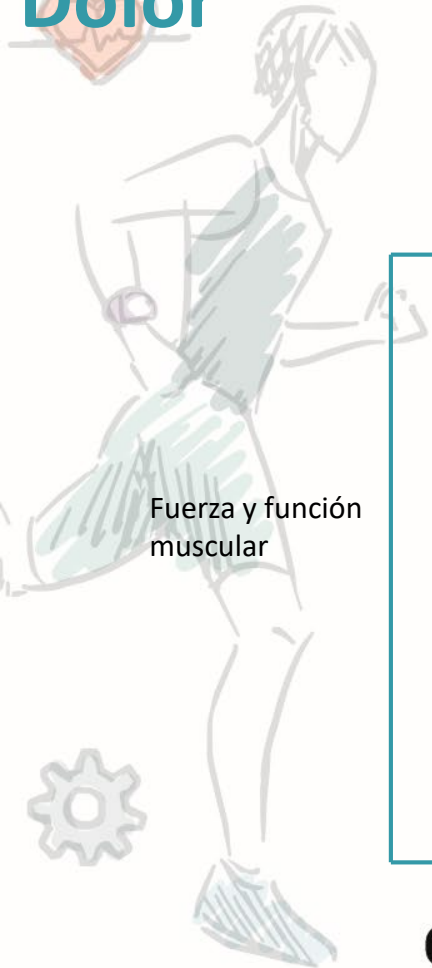
# Dolor



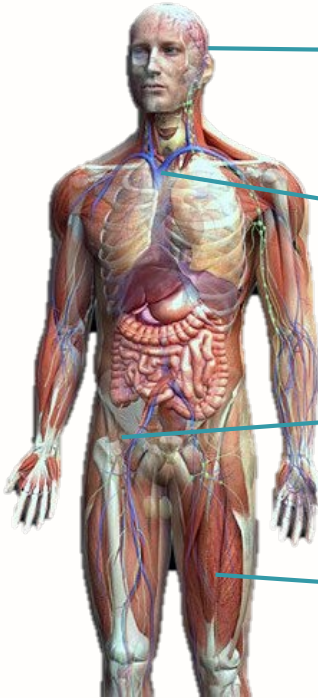
REVIEW



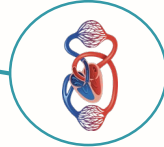
## The role of exercise for pain management in adults living with and beyond cancer: a systematic review and meta-analysis



Fuerza y función muscular



Aspectos psicológicos →  
Liberación endorfinas:  
Efecto Analgésico



Circulación sanguínea



Rigidez articular



Tensión muscular

#EjercicioContraelCáncer



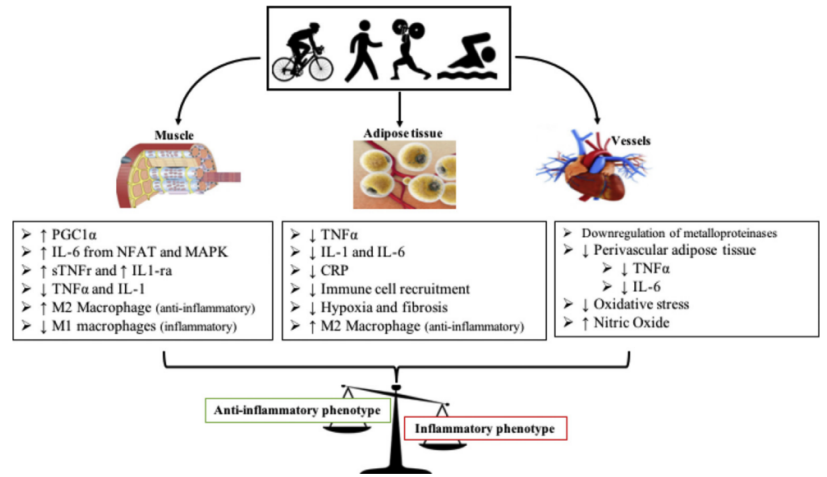
Cuthbert, et al. Supportive Care in Cancer. 2023;31(5).254



## Cancer pain and its relationship to systemic inflammation: An exploratory study



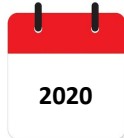
### Exercise and inflammation



**Fig. 1.** Exercise may promote an anti-inflammatory phenotype in different tissues. PGC1 $\alpha$ : peroxisome proliferator-activated receptor  $\gamma$  co-activator 1 $\alpha$ , IL-6: interleukin 6, NFAT: nuclear factor of activated T-cells, MAPK: mitogen-activated protein kinase, sTNF $\alpha$ : soluble tumour necrosis factor receptors, IL-1ra: interleukin 1 receptor antagonist, TNF $\alpha$ : tumour necrosis factor alpha, IL-1: interleukin 1, CRP: C-reactive protein.

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# Deterioro cognitivo



Annals of Oncology 30: 1925–1940, 2019  
doi:10.1093/annonc/mdz410  
Published online 16 October 2019

REVIEW

Cancer-related cognitive impairment: an update on state of the art, detection, and management strategies in cancer survivors



#EjercicioContraelCáncer

Meeting Place. Paseo de la Castellana, 81. Madrid

17 DE JUNIO DE 2024

24

## Management strategies

A survey conducted in ~1600 survivors (>85% breast cancer survivors), at a median of ~3 years after cancer treatment, found 75% of participants self-reported cognitive symptoms related to cancer treatments [5]. Three quarters of respondents reported cognitive symptoms impacted their ability to return to work. Most participants (75%) wished to receive support, particularly cognitive training (72%). This highlights the importance of monitoring for CRCL. Strategies of management of CRCL have been studied [112–127].

## Physical activity

A few studies have shown exercise programmes can improve cognitive complaints [118, 126] but most have not assessed objective cognitive function [116]. However, a recent study evaluates cognition in sedentary breast cancer survivors randomized to a 12-week exercise programme compared with a wait-list control group. The exercise group had improvement in processing speed in those diagnosed within the previous 2 years, and reduction in cognitive symptoms [126]. Another analysis of survivors randomized to eight sessions of yoga versus controls found improvement in cognitive symptoms in the yoga group [118]. In rat models, physical exercise has been shown to reduce cognitive deficits induced by chemotherapy by preventing diminished hippocampal neurogenesis [119].

Fabi, et al. Annals of Oncology. 2020;31(6).713-723



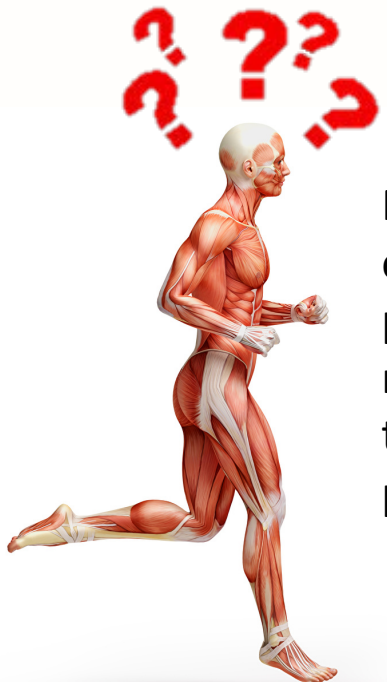


# Deterioro cognitivo



## The Effect of Exercise on Cancer-Related Cognitive Impairment and Applications for Physical Therapy: Systematic Review of Randomized Controlled Trials

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Department of Physical Therapy,  
University of British Columbia  
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British Columbia, Canada V7J 3K6.  
Address all correspondence to  
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K. Zdravec, BSc, Rehabilitation  
Sciences, University of British  
Columbia.



Parece que hay efectos positivos, pero se necesitan más estudios que tengan CRCI como primary outcome



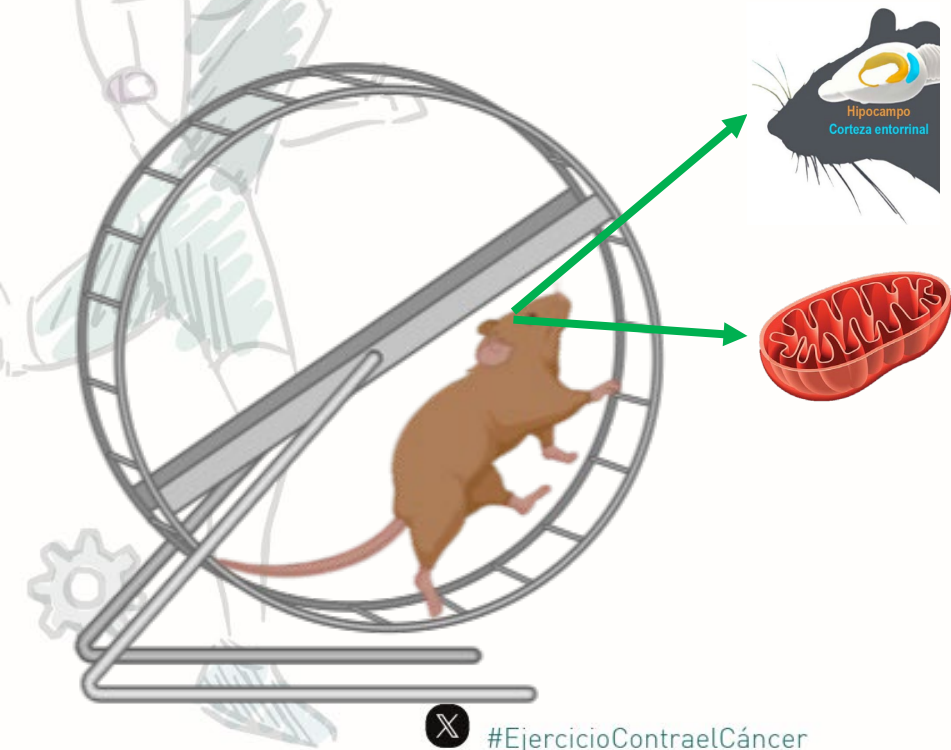
#EjercicioContraelCáncer



Physical exercise prevents cognitive impairment by enhancing hippocampal neuroplasticity and mitochondrial function in doxorubicin-induced chemobrain



# Deterioro cognitivo



Disfunciones en la neuroplasticidad del hipocampo

Disfunciones en la función mitocondrial de las neuronas



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# Neurotoxicidad



Systemic anticancer therapy-induced peripheral and central neurotoxicity: ESMO—EONS—EANO Clinical Practice Guidelines for diagnosis, prevention, treatment and follow-up<sup>☆</sup>

**Table 1. CIPN prevention: studied interventions**

Intervention	Comments	LoE/GoR	References
<b>Pharmacological intervention (none of these can be recommended)</b>			
ALC	ALC therapy resulted in significantly worse CIPN over 2 years	I, E	71
Acetylcysteine	Oxaliplatin-based ChT	II, D	72
Alpha-lipoic acid	Platinum-based ChT	II, D	73
Amifostine	Platinum- and taxane-based ChT	I, D	74
Amitriptyline	Vinca alkaloids, platinum-based or taxanes	II, E	75
Calcium/magnesium	Exclusively oxaliplatin-based ChT	I, E	76
Calmingafodipir <sup>a</sup>	So far only positive randomised phase III study (POLAR programme) is ongoing	No recommendation possible	77
Carbamazepine	Oxaliplatin-based ChT	II, E	78
DDTC	Cisplatin-based ChT	I, E	74,79
GSH	Platinum- and taxane-based ChT	I, E	74,80
Goshajinkigan	Platinum- and taxane-based ChT	I, D	81
Minocycline	Taxane-based ChT	II, D	82
MR309, selective sigma-1 receptor antagonist	So far only a positive randomised phase II study (potential neuroprotective)	No recommendation possible	83
Nimodipine	Cisplatin-based ChT	II, E	72
Omega-3 fatty acids	Taxane-based, positive outcome but small sample size (n = 57), not enough evidence to support the use	II, D	84
Vitamin B	Taxane-, oxaliplatin- or vincristine-based ChT	II, D	85
Vitamin E	Platinum- and taxane-based ChT	II, D	74
Multivitamin use	DELCAp study. Patients were asked for multivitamin use. Those who used multivitamins had a reduced risk of CIPN, but this was probably a surrogate for other related behaviours, which might be the actual drivers of the association with reduced CIPN	III, D	86
<b>Non-pharmacological intervention</b>			
Acupuncture	(n = 48), outcome of electroacupuncture was worse than with sham acupuncture	II, E	87
Exercise	Many early reports suggest a possible protective effect of exercise on CIPN	II, C	20
Compression therapy using surgical gloves	In one study, additional drugs such as duloxetine were allowed	III, C	18,19
Cryotherapy with, for example, frozen socks and gloves	Most evidence available for taxane therapy	II, C	15–17,88

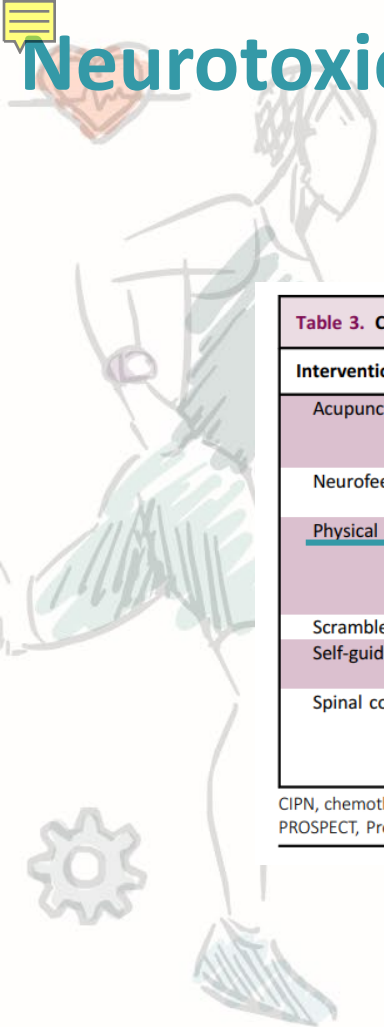


Systemic anticancer therapy-induced peripheral and central neurotoxicity: ESMO–EONS–EANO Clinical Practice Guidelines for diagnosis, prevention, treatment and follow-up<sup>☆</sup>

**Table 3. CIPN therapy: non-pharmacological interventions**

Intervention	Comments	LoE/GoR	References
Acupuncture	Several recent randomised phase II studies are positive, Cochrane review from 2017: insufficient data for/against a recommendation	II, C	36–38,96
Neurofeedback	Pilot study in 71 cancer survivors, potential benefit for EEG-based neurofeedback	II, C	43
<u>Physical exercise</u>	Several strategies are available: supervised medical exercise (sensorimotor function, endurance, strength of flexibility), self-management interventions (e.g. EXCAP <sup>®</sup> )	II, B	4,20
Scrambler therapy	Noninvasive cutaneous electrostimulation	II, D	39,40
Self-guided online cognitive behavioural strategies	PROSPECT, pilot RCT ( <i>n</i> = 60), greater improvements in 'worst' pain than usual care	II, C	41
Spinal cord stimulation	Small number case series, only in truly refractory pain due to CIPN, invasive and expensive procedure: electrode insertion into the dorsal re-entry zone of spinal cord and pulse generator implantation under the skin	V, C	42

CIPN, chemotherapy-induced peripheral neurotoxicity; EEG, electroencephalogram; EXCAP<sup>®</sup>, Exercise for Cancer Patients; GoR, grade of recommendation; LoE, level of evidence; PROSPECT, Proactive Self-Management Program for Effects of Cancer Treatment; RCT, randomised controlled trial.



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# Neurotoxicidad



REVIEW ARTICLE (META-ANALYSIS)

## Can Physical Exercise Prevent Chemotherapy-Induced Peripheral Neuropathy in Patients With Cancer? A Systematic Review and Meta-analysis



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Lopez-Garzon, et al. Archives of physical medicine and rehabilitation. 2022;103(11).2197-2208



# Neurotoxicidad



## Effects of exercise on chemotherapy-induced peripheral neuropathy in cancer patients: a systematic review and meta-analysis

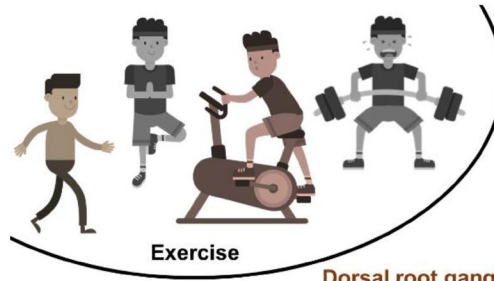


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# Neurotoxicidad

Review

## Mechanisms, Mediators, and Moderators of the Effects of Exercise on Chemotherapy-Induced Peripheral Neuropathy

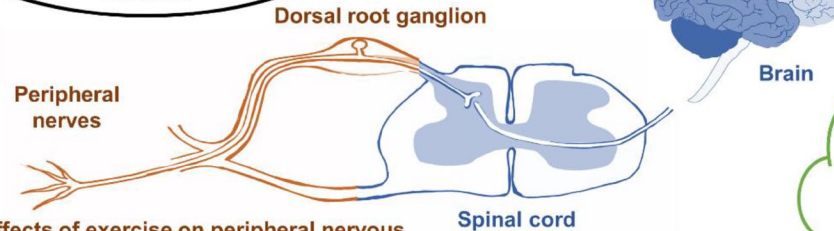


### Effects of exercise on central nervous system (brain & spinal cord)

- Improve mitochondrial function
- Neurotrophic factors
- Changes in neurotransmitter systems
- Interoceptive brain system

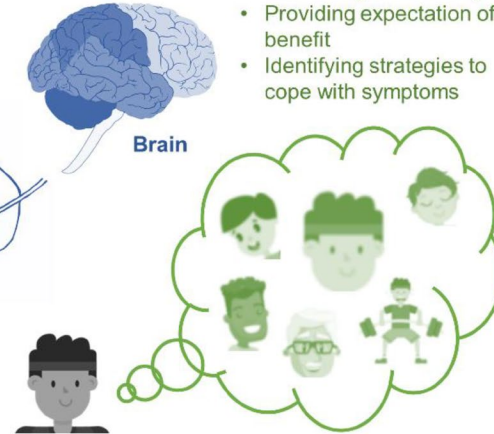
### Effects of exercise on psychosocial processes

- Improving mood, anxiety, depression
- Increasing social support
- Increasing self-efficacy
- Providing expectation of benefit
- Identifying strategies to cope with symptoms



### Effects of exercise on peripheral nervous system (peripheral nerves and dorsal root)

- Reduction in axonal degeneration
- Increase neurotrophic factors
- Anti-inflammation
- Improve mitochondria and oxidative profile



#EjercicioContraelCáncer

# Alteraciones del sueño

2023

SPECIAL ARTICLE

Insomnia in adult patients with cancer: ESMO Clinical Practice Guideline<sup>☆</sup>

**Table 2. Evidence-based recommendations regarding treatment for insomnia in patients with cancer and cancer survivors<sup>a</sup>**

Intervention (based on studies involving different cancer types and treatment status)	LoE	GoR	Example of evidence (SRMA or RCT)
<b>Psychological interventions</b>			
Face-to-face CBT-I			
• Mixed cancer (survivors)	I	A	Johnson et al. (2016) <sup>55</sup> (SRMA)
• Breast cancer (active)	I	A	Berger et al. (2009) <sup>45</sup> (RCT)
• Breast cancer (survivors)	I	A	Matthews et al. (2014) <sup>49</sup> (RCT)
eCBT-I			
• Breast cancer (survivors)	II	A	Zachariae et al. (2018) <sup>61</sup> (RCT)
• Breast cancer (active)	II	A	Savard et al. (2014) <sup>50</sup> (RCT)
BBT-I			
• Mixed cancers (active)	II	B	Casault et al. (2015) <sup>65</sup> (RCT)
• Breast cancer (active)	II	B	Palesh et al. (2020) <sup>66</sup> (RCT)
MBT			
• Breast cancer (survivors)	II	B	Lengacher et al. (2015) <sup>72</sup> (RCT)
• Leukaemia (active)	II	B	Zhang et al. (2017) <sup>74</sup> (RCT)
<b>Pharmacotherapy</b>			
Hypnotics [benzodiazepines (triazolam), nonbenzodiazepines (eszopiclone, zolpidem)]			
• Breast cancer (active)	II	C	Jacobsen et al. (1994) <sup>80</sup> (RCT)
• Haematological cancers (active)	II	B	Dimsdale et al. (2011) <sup>81</sup> (RCT)
• Advanced stage mixed cancers	II	B	Jakobsen et al. (2022) <sup>110</sup> (RCT)
Melatonin			
• Breast cancer (active)	II	B	Hansen et al. (2014) <sup>88</sup> (RCT)
			Palmer et al. (2020) <sup>90</sup> (RCT)
• Mixed cancers (active)	II	B	Yennurajalingam et al. (2021) <sup>83</sup> (RCT)
			Shahrokhi et al. (2021) <sup>82</sup> (RCT)
<b>Other approaches</b>			
Physical exercise			
• Lung cancer (active)	II	B	Chen et al. (2016) <sup>99</sup> (RCT)
• Breast cancer (survivors)	II	B	Nguyen et al. (2021) <sup>102</sup> (RCT)
Bright light therapy			
• Breast cancer (active)	II	C	Wu et al. (2021) <sup>108</sup> (RCT)
• Ovarian or endometrial cancer (survivors)	II	C	Fox et al. (2021) <sup>107</sup> (RCT)

CBT-I, brief behavioural therapy for insomnia; CBT, cognitive-behavioural therapy for insomnia; eCBT-I, digitally delivered cognitive-behavioural therapy for insomnia; GoR, grade of recommendation; LoE, level of evidence; MBT, mindfulness-based therapy; RCT, randomised controlled trial; SRMA, systematic review and meta-analysis.

<sup>a</sup>See Supplementary Table S3, available at <https://doi.org/10.1016/j.esmoop.2023.102047>, for a full list of relevant studies.

Grassi, et al. ESMO open. 2023;8(6).102047

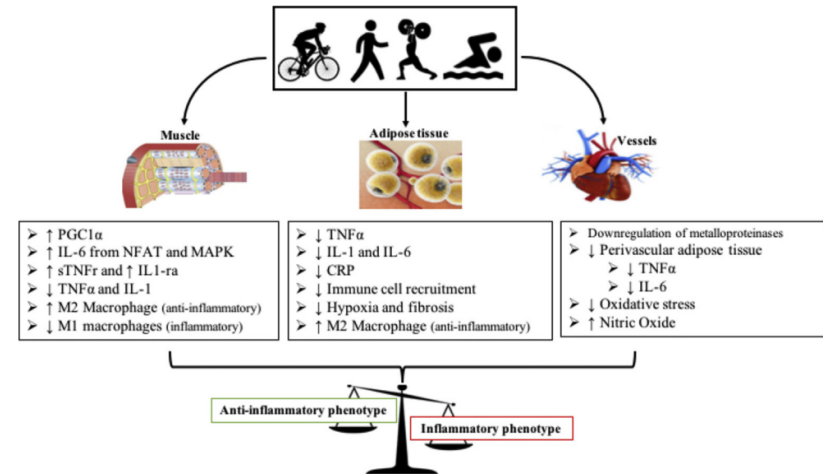


# Alteraciones del sueño



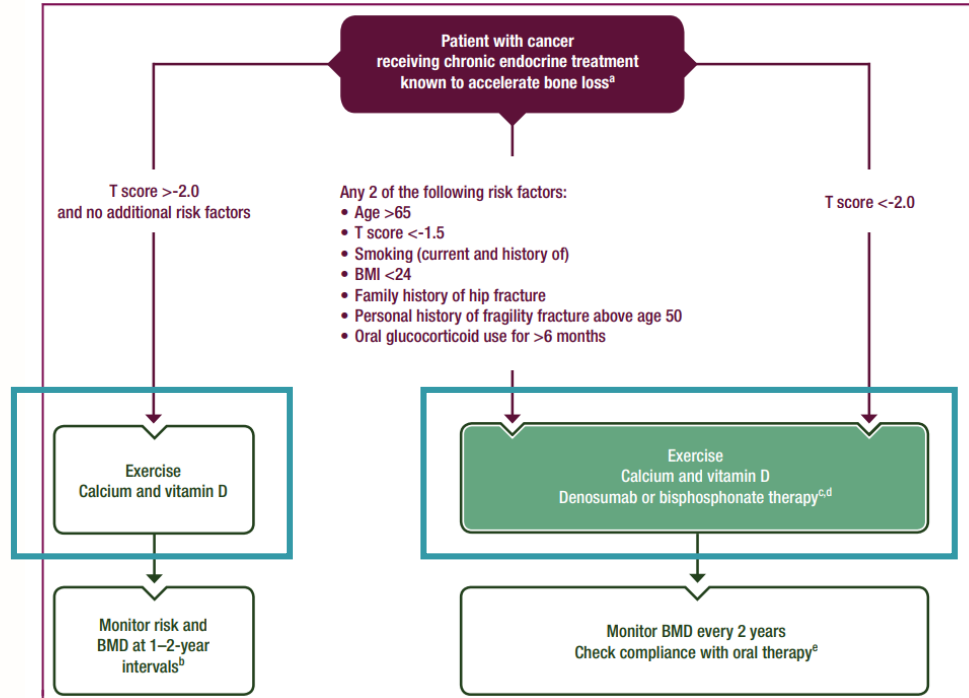
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The association between sedentary behavior, exercise, and sleep disturbance: A mediation analysis of inflammatory biomarkers



**Fig. 1.** Exercise may promote an anti-inflammatory phenotype in different tissues. PGC1 $\alpha$ : peroxisome proliferator-activated receptor  $\gamma$  co-activator 1 $\alpha$ , IL-6: interleukin 6, NFAT: nuclear factor of activated T-cells, MAPK: mitogen-activated protein kinase, sTNF $\alpha$ : soluble tumour necrosis factor receptors, IL-1ra: interleukin 1 receptor antagonist, TNF $\alpha$ : tumour necrosis factor alpha, IL-1: interleukin 1, CRP: C-reactive protein.

## Bone health in cancer: ESMO Clinical Practice Guidelines<sup>†</sup>



Coleman, et al. Annals of oncology. 2020;31(12).1650-1663



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## Bone loss induced by cancer treatments in breast and prostate cancer patients



**Table 3** Pharmacological and non-pharmacological measures for the prevention and treatment of osteoporosis in patients with cancer

Non-pharmacological measures	Pharmacological measures
<i>Smoking cessation</i>	<i>Hormone replacement therapies</i>
<i>Avoid excess alcohol intake</i>	<i>Antiresorptive agents</i>
<i>Avoid excess caffeine intake</i>	Selective estrogen receptor modulators (SERMs)
<i>Avoid sedentary lifestyle</i>	Calcitonin
<i>Prevent falls</i>	Bisphosphonates (alendronate, risedronate, ibandronate, zoledronate)
<i>Balanced diet</i>	Denosumab (anti-RANKL biologic)
<i>Adequate intake of:</i>	
Trace minerals	
Proteins	
Vitamin D	
Calcium	
Combination of calcium and vitamin D	
<u>Physical therapy (improve muscle strength and balance)</u>	

RANKL receptor activator of NF- $\kappa$ B ligand, SERMs selective estrogen receptor modulators



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## Mecanotransducción



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original

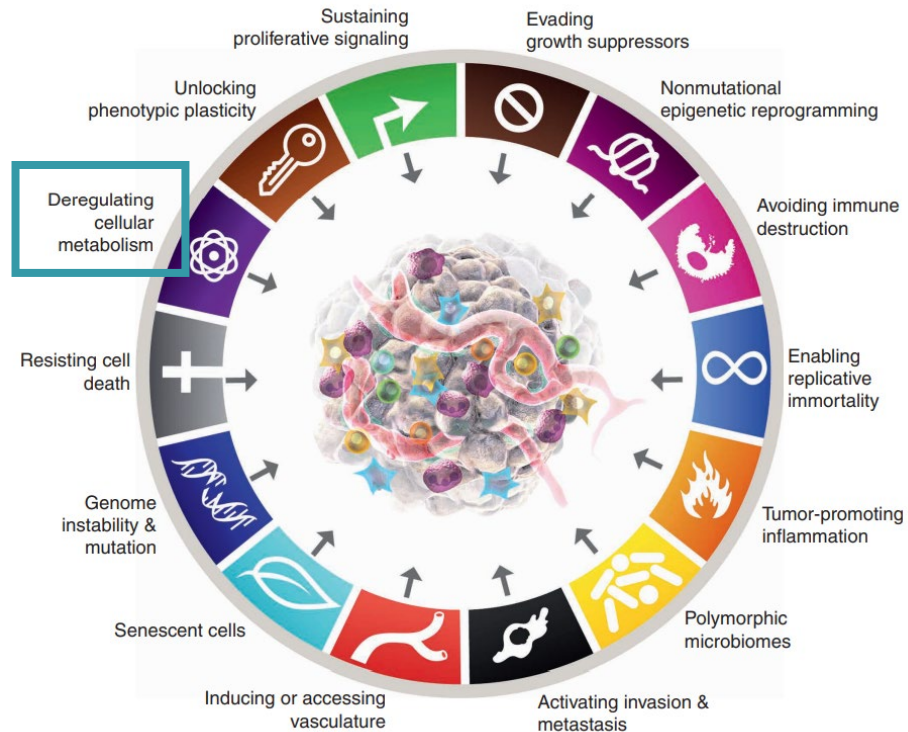
# Exercise Recommendation for People With Bone Metastases: Expert Consensus for Health Care Providers and Exercise Professionals

# Afectaciones óseas



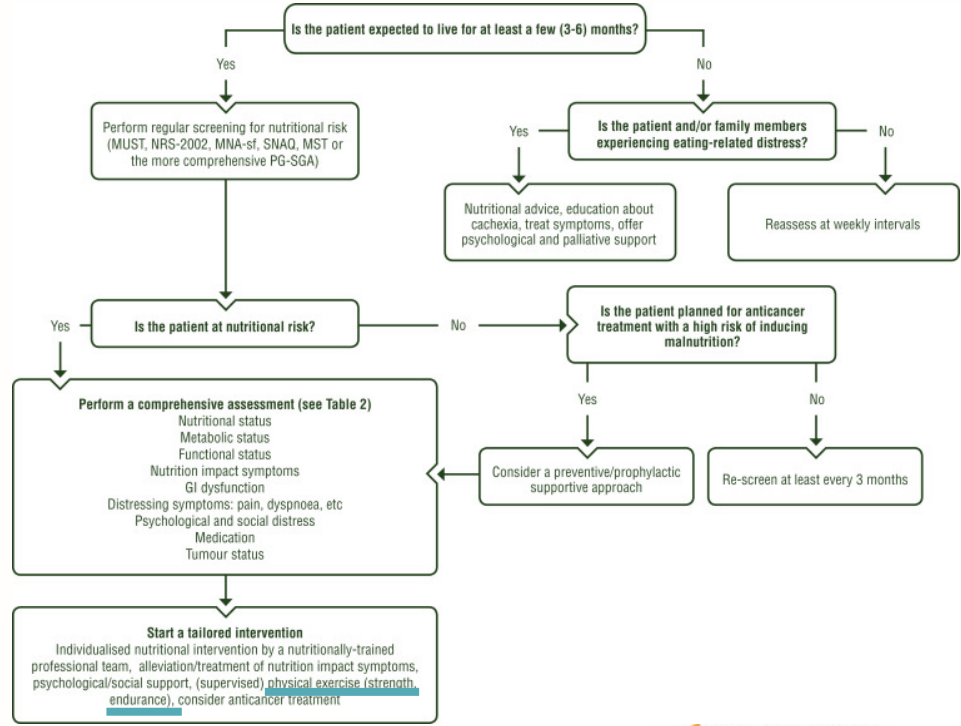
Mismas recomendaciones

# Toxicidad metabólica



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# Toxicidad metabólica



Arends, et al. ESMO Open. 2021;6(3).100092



## Treatment of cancer cachexia with exercise



#EjercicioContraelCáncer



# Toxicidad metabólica



Review Article

## Can Exercise Counteract Cancer Cachexia? A Systematic Literature Review and Meta-Analysis

Integrative Cancer Therapies  
Volume 19: 1–14  
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DOI: 10.1177/1534735420940414  
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Antes del tumor

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Niels, et al. Integrative cancer therapies. 2020;19:57-65

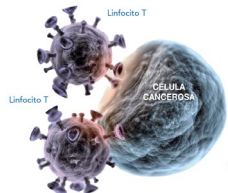


2023

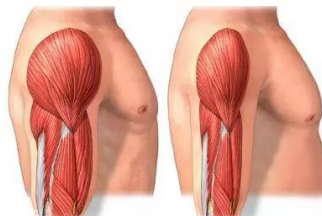
## Treatment of cancer cachexia with exercise



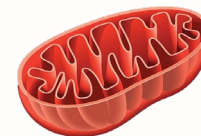
Inhibiendo inflamación sistémica



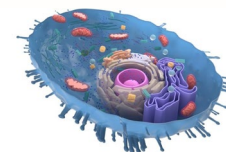
Regulando la función inmune



Manteniendo la masa muscular



Mejorando la función mitocondrial



Reduciendo la autofagia



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## SPECIAL ARTICLE

### Anxiety and depression in adult cancer patients: ESMO Clinical Practice Guideline<sup>†</sup>

L. Grassi<sup>1</sup>, R. Caruso<sup>1</sup>, M. B. Riba<sup>2,3</sup>, M. Lloyd-Williams<sup>4,5</sup>, D. Kissane<sup>6</sup>, G. Rodin<sup>7</sup>, D. McFarland<sup>8,9</sup>, R. Campos-Ródenas<sup>10</sup>, R. Zachariae<sup>11,12</sup>, D. Santini<sup>13</sup> & C. I. Ripamonti<sup>14</sup>, on behalf of the ESMO Guidelines Committee

2023

<sup>1</sup>Institute of Psychiatry, Department of Neuroscience and Rehabilitation, University of Ferrara, Ferrara, Italy; <sup>2</sup>Department of Psychiatry, University of Michigan, Ann Arbor; <sup>3</sup>University of Michigan Rogel Cancer Center, University of Michigan, Ann Arbor, USA; <sup>4</sup>Academic Palliative and Supportive Care Studies Group (APSCSG), Primary Care and Mental Health, University of Liverpool, Liverpool; <sup>5</sup>Department of Supportive and Palliative Care, Liverpool John Moores University, Liverpool, UK; <sup>6</sup>Department of Psychiatry, Monash University and Monash Medical Centre, Monash Health, Clayton, Australia; <sup>7</sup>Department of Supportive Care, Princess Margaret Cancer Centre, Toronto, Canada; <sup>8</sup>Department of Psychiatry, University of Rochester, Rochester; <sup>9</sup>Wilmont Cancer Institute, University of Rochester Medical Center, Rochester, USA; <sup>10</sup>Department of Psychiatry, Hospital Clínico Universitario Lozano Blesa, University of Zaragoza, Zaragoza, Spain; <sup>11</sup>Unit for Psychooncology and Health Psychology, Department of Oncology, Aarhus University Hospital, Aarhus; <sup>12</sup>Department of Psychology and Behavioural Sciences, Aarhus University, Aarhus, Denmark; <sup>13</sup>UOC Medical Oncology, AUSL Latina, Sapienza University of Rome, Aprilia; <sup>14</sup>Oncology-Supportive Care in Cancer, Department of Oncology & Haematology Fondazione IRCCS, Istituto Nazionale dei Tumori di Milano, Milan, Italy



Available online 14 March 2023



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# Problemas psicológicos

Recommendation	Type	Evidence Quality	Strength
<b>Treatment and Care Options for Depressive Symptoms</b>			
<p><b>2.1.</b> For patients with moderate to severe depressive symptoms, culturally informed and linguistically appropriate information should be provided to patients and patient-identified caregivers, family members, or trusted confidants. Information might include the following: the commonality (frequency) of depression, common psychological, behavioral, and vegetative symptoms, signs of symptom worsening, and indications to contact the medical team (with provision of contact information)</p>	EB	I	S
<p><b>2.2.</b> For a patient with moderate symptoms of depression, clinicians should offer individual or group therapy with any one of the following treatment options:                      Cognitive therapy or cognitive behavior therapy                      Behavioral activation  <u>Structured physical activity and exercise</u>                      Mindfulness based stress reduction                      Psychosocial interventions using empirically supported components (eg, relaxation, problem solving)</p>	EB	I	S
<p><b>2.3.</b> For a patient with severe symptoms of depression, clinicians should offer individual therapy with any one of the following treatment options:                      Cognitive therapy or cognitive behavior therapy                      Behavioral activation                      Mindfulness-based stress reduction                      Interpersonal therapy</p>	EB	I	S
<p><b>2.4.</b> Treating clinicians may offer a pharmacologic regimen for depression in patients without access to first-line treatment, those expressing a preference for pharmacotherapy, or those who do not improve after first-line psychological or behavioral management. Pharmacotherapy should also be considered for patients with a history of treatment response to medications, severe symptoms, or accompanying psychotic features</p>	EB	L	W

**Qualifying Statement:** Despite the limitations and weak evidence for pharmacologic management, empirically there is some evidence of benefit to warrant their inclusion as an alternative option

Recommendation	Type	Evidence Quality	Strength
<b>Treatment and Care Options for Anxiety Symptoms</b>			
<p><b>3.1.</b> For patients with moderate to severe anxiety symptoms, culturally informed and linguistically appropriate information should be provided to patients and patient-identified caregivers, family members, or trusted confidants. Information might include the following: commonality (frequency) of stress and anxiety, psychological, behavioral, and cognitive symptoms, indications of symptom worsening, and medical team contact information</p>	EB	I	S
<p><b>3.2.</b> For a patient with moderate symptoms of anxiety, clinicians should offer individual or group therapy with any one of the following treatment options:                      Cognitive behavior therapy                      Behavioral activation  <u>Structured physical activity and exercise</u>                      Psychosocial interventions with empirically supported components (eg, relaxation, problem solving)</p>	EB	I	S
<p><b>3.3.</b> For a patient with severe symptoms of anxiety, clinicians should offer individual therapy with any one of the following treatment options:                      Cognitive behavior therapy                      Behavioral activation                      Mindfulness-based stress reduction                      Interpersonal therapy</p>	EB	I	S
<p><b>3.4.</b> Treating clinicians may offer a pharmacologic regimen for anxiety in patients without access to first-line treatment, those expressing a preference for pharmacotherapy, or those who do not improve after first-line psychological or behavioral management</p>	EB	L	W

**FIG 1.** Summary of guideline recommendations. EB, evidence-based; I, intermediate; L, low; S, strong; W, weak.



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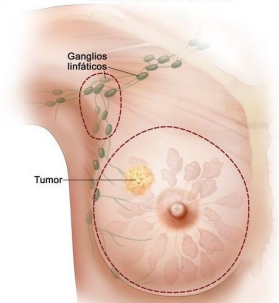


# Problemas psicológicos

ARTICLES

## Effects of Exercise Interventions on Breast Cancer Patients During Adjuvant Therapy

A Systematic Review and Meta-analysis of Randomized Controlled Trials

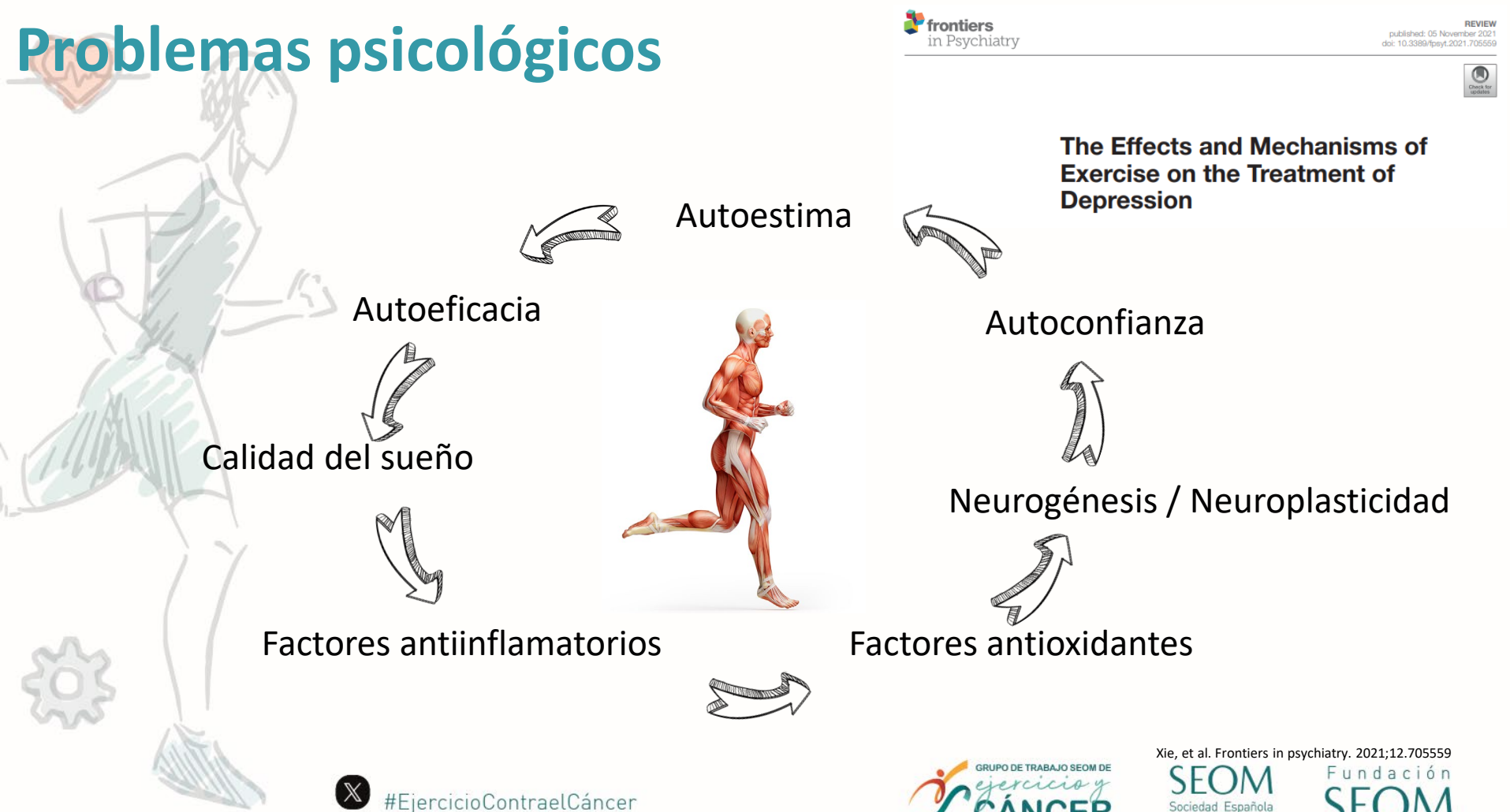


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GRUPO DE TRABAJO SEOM DE  
*ejercicio y*  
**CÁNCER**

Lee y Lee. Cancer nursing. 2020;43(2). 115-125  
**SEOM**  
Sociedad Española  
de Oncología Médica  
**Fundación  
SEOM**

# Problemas psicológicos



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# Linfedema



APPLIED SCIENCES

The Effect of Exercise for the Prevention and Treatment of Cancer-Related Lymphedema: A Systematic Review with Meta-analysis



Previene  
No exacerba  
Mejora



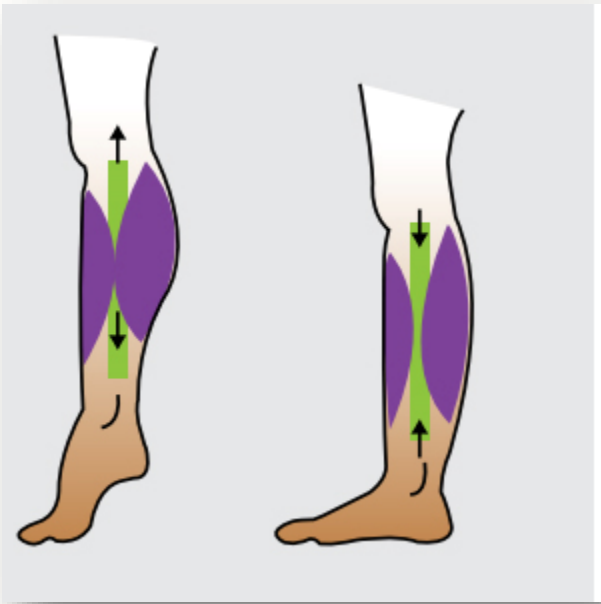
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# Linfedema



## Lymphedema

Strategies for Management



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Cohen, Payne & Tunkel. Cancer. 2001;92:980-987





# I JORNADA SEOM EJERCICIO FÍSICO Y CÁNCER

17 DE JUNIO DE 2024

Meeting Place. Paseo de la Castellana, 81. Madrid

GRACIAS POR  
VUESTRA ATENCIÓN



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