



## Information about the course

**Degree:** Bachelor of Sciences of Physical Activity and Sport

**Faculty:** Faculty of Physical Activity and Sport Sciences

**Code:** 280317 **Name:** Physical Activity and Health

**Credits:** 6,00 ECTS **Year:** 3 **Semester:** 1

**Module:** 3) Specific Obligatory Formation Module.

**Subject Matter:** Physical activity and physical exercise for health and with special populations.

**Type:** Obligatoria

**Branch of knowledge:** Health Sciences

**Department:** Physical Preparation and Conditioning

**Type of learning:** Classroom-based learning

**Language/-s in which it is given:**

**Teachers:**

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## Module organization

### 3) Specific Obligatory Formation Module.

Subject Matter	ECTS	Subject	ECTS	Year/semester
Physical activity and physical exercise for health and with special populations.	12	Physical Activity and Health	6	3/1
		Prescription and Programmes for Healthy Lifestyles	6	4/1
Physical exercise, fitness and sports physical training.	18	Evaluation of Biological Condition	6	3/1
		Planning and Methodology of Training in PA	6	3/2
		Prevention and Rehabilitation of Injuries in PA	6	4/1
Teaching of Physical Education and Sports.	18	Design, Evaluation and Intervention in Educational Programmes	6	4/1
		Didactics and Methodology of Sports and Physical Activity	6	3/1
		Social Morality and Professional Deontology	6	4/1
Sports organization and management.	12	Sports Marketing	6	3/2
		Sports Training Planning and Organisation	6	3/1



## Learning outcomes

Al finalizar la asignatura, el estudiante deberá demostrar haber adquirido los siguientes resultados de aprendizaje:

**R1 - Design and autonomously implement exercise and physical-sports activities focused on health from a multidisciplinary perspective.**

Learning outcomes of the specified title

**Type of AR:** Habilidades o Destrezas

- Apply the principles derived from the concept of integral ecology in your proposals or actions, whatever the scope and area of knowledge and the contexts in which they are proposed.
- Articulate and deploy programs for the promotion, orientation, coordination, supervision and technical-scientific evaluation of physical activity, physical exercise and sport for the entire population, with emphasis on special populations, with the presence of a professional or carried out in a autonomous by the citizen, in the different types of spaces and in any sector of professional intervention in physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; direction of physical activity and sport) according to the possibilities and needs of citizens, with the aim of achieving their autonomy, understanding, and the greatest and most appropriate practice of physical activity and sport.
- Design and apply fluidly, naturally, consciously and continuously adequate, efficient, systematic, varied physical exercise and physical condition, based on scientific evidence, for the development of adaptation and improvement or readaptation processes of certain abilities of each person in relation to human movement and its optimization; in order to be able to solve poorly structured, increasingly complex and unpredictable problems and with emphasis on special populations.
- Develop theoretical-practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being when faced with the great questions of life.
- Identify, organize, direct, plan, coordinate, implement and carry out technical-scientific evaluation of organizational resources and material resources and sports facilities, including their basic and functional design as well as adequate selection and use, for each type of activity, with the purpose of achieving safe, efficient and healthy physical and sports activities, adapted to the development, characteristics and needs of individuals and the typology of the activity, space and entity in any type of organization, population, context and in any sector of professional intervention of physical activity and sport and with emphasis on special populations and guaranteeing safety, efficiency and professionalism in the activity carried out in compliance with current regulations.
- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.



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## Type of AR: Competencias

- Promote education, dissemination, information and constant guidance to people and leaders on the benefits, significance, characteristics and positive effects of the regular practice of physical and sports activity and physical exercise, and the risks and harms of inadequate practice. and the elements and criteria that identify its adequate execution, as well as information, guidance and advice on the possibilities of appropriate physical activity and sport in its environment in any sector of professional intervention.

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R2 - Select, based on experimentation, the appropriate exercise for prescribing healthy physical activity, considering the needs of each population and context.

Learning outcomes of the specified title

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- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.

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## Type of AR: Competencias



- Articulate and deploy with rigor and a scientific attitude the justifications on which to constantly and professionally prepare, support, substantiate and justify all acts, decisions, processes, procedures, actions, activities, tasks, conclusions, reports and professional performance.
- Promote education, dissemination, information and constant guidance to people and leaders on the benefits, significance, characteristics and positive effects of the regular practice of physical and sports activity and physical exercise, and the risks and harms of inadequate practice. and the elements and criteria that identify its adequate execution, as well as information, guidance and advice on the possibilities of appropriate physical activity and sport in its environment in any sector of professional intervention.

R3 - Identify, correct, and optimize habits, activities, and execution of exercises/technical movements, providing appropriate feedback to avoid health risks (using various methodologies).

Learning outcomes of the specified title

**Type of AR:** Habilidades o Destrezas

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R4 - Recognize supportive contexts for physical exercise adherence and prevention of physical and psychosocial health risks.

Learning outcomes of the specified title

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### **R5 - Critically analyze and discuss various documentary information sources (in Spanish and English) regarding the effects of physical activity.**

Learning outcomes of the specified title

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## Assessment system

### Modalidad presencial

Assessed learning outcomes	Granted percentage	Assessment tool
R1, R2, R3, R4	30,00%	Written and/or practical tests.
R1, R2, R3, R4, R5	20,00%	Individual or Group Work / Project.
R1, R2, R3, R4, R5	20,00%	Exercises and Practices in the Classroom.
R1, R2, R3, R4, R5	30,00%	Oral tests or presentation.

### Observations

The student may keep the evaluation instruments passed during the 3 years following the first registration.

It is necessary to obtain 50% in the following evaluation instruments to pass the subject:

- Written and/or practical tests · Individual or Group Work / Project
- Oral tests or presentation

According to article 4.2. of the Guidelines for Evaluation at the UCV, the limit of absences that can give rise to eventualities (medical consultation, bureaucratic procedures...) that do not have to be justified, is 30%. If any of these criteria is not met, the student will be graded with a maximum of 4.5.

### SPECIFICATIONS TO THE EVALUATION INSTRUMENTS

#### Written and/or practical tests



It consists of a final test on the official call dates. Multiple choice test with questions that may be multi-answer (4 options with a 33.3% penalty) and/or true or false (with a 50% penalty).

### **Exercises and Practices in the Classroom**

Participate and actively carry out the tasks of the theoretical-practical and/or practical classes in the classroom or sports space. These activities to be carried out can only be delivered by students who have attended said sessions.

### **Individual or Group Work / Project**

Two projects/works will be carried out on contents related to the subject. Their typology and theme will be detailed by the teacher. As an example, a project could be: making a video of a muscle group and a material, giving a practical session, surveys, among others. The delivery date will be indicated in the schedule of each group.

### **Oral tests or presentation**

·Oral type test\* on theoretical/practical questions. \*Only students who pass the multiple choice test with a minimum of 5 points will be able to proceed to the oral test. The evaluation system of the subject is cumulative, so the grades obtained in the different partial exams are independent and added.

*The detailed explanation (procedure for work) as well as the evaluation tools (sheets or rubrics) of each section will be posted on the platform of each group available to the student.*

## Actividades formativas

The methodologies to be used so that the students reach the expected learning outcomes will be the following:

- M1 Attendance at practices.
- M2 Resolution of problems and cases.
- M3 Discussion in small groups.
- M5 Presentation of content by the teacher.
- M6 Practical lesson.
- M7 Group dynamics and activities.



## IN-CLASS TRAINING ACTIVITIES

ACTIVITY	RELATIONSHIP WITH THE COURSE LEARNING OUTCOMES	METHODOLOGY	HOURS	ECTS
<b>THEORETICAL CLASS:</b> Presentation of contents by the teacher. Competency analysis. Demonstration of capabilities, skills and knowledge in the classroom.	R1, R2, R3, R4	Resolution of problems and cases. Presentation of content by the teacher.	34,00	1,36
<b>PRACTICAL CLASS / SEMINAR:</b> Group dynamics and activities. Resolution of problems and cases. Practical laboratories. Data search, computer classroom, library, etc. Meaningful construction of knowledge through student interaction and activity.	R1, R2, R3, R4, R5	Attendance at practices. Discussion in small groups. Practical lesson.	16,00	0,64
<b>EVALUATION:</b> Set of oral and/or written tests used in the evaluation of the student, including the oral presentation of the final degree project.	R1, R2, R3, R4, R5	Resolution of problems and cases.	6,00	0,24
<b>TUTORING:</b> Supervision of learning, evolution. Discussion in small groups. Resolution of problems and cases. Presentation of results before the teacher. Presentation of diagrams and indexes of the proposed works.	R1, R2, R3, R4, R5	Resolution of problems and cases. Discussion in small groups.	4,00	0,16
<b>TOTAL</b>			<b>60,00</b>	<b>2,40</b>



## TRAINING ACTIVITIES OF AUTONOMOUS WORK

ACTIVITY	RELATIONSHIP WITH THE COURSE LEARNING OUTCOMES	METHODOLOGY	HOURS	ECTS
GROUP WORK: Problem solving. Preparation of exercises, memoirs, to present or deliver in classes and/or in tutoring.	R1, R2, R3, R4, R5	Group dynamics and activities.	50,00	2,00
SELF-EMPLOYED WORK: Study, Individual preparation of exercises, assignments, reports, to present or deliver in classes and/or in tutoring. Activities in platform or other virtual spaces.	R1, R2, R3, R4, R5	Resolution of problems and cases.	40,00	1,60
<b>TOTAL</b>			<b>90,00</b>	<b>3,60</b>

## Description of contents

Descripción de contenidos necesarios para la adquisición de los resultados de aprendizaje.

### Theoretical content:

Block of content	Contents
BLOCK I	BASIC CONCEPTS AND CONTEXTUALIZATION OF THE PHYSICAL ACTIVITY AND HEALTH
BLOCK II	EFFECTS OF PHYSICAL ACTIVITY. BENEFITS AND RISKS
BLOCK III	HEALTHY PHYSICAL ACTIVITIES. GENERAL RECOMMENDATIONS ON THE HEALTHY PHYSICAL ACTIVITY PRESCRIPTION (ACSM)
BLOCK IV	CORRECT, SAFE AND EFFECTIVE PERFORMANCE OF THE EXERCISES. PRACTICAL APPLICATIONS



## Temporary organization of learning:

Block of content	Sessions	Hours
BLOCK I	10	20,00
BLOCK II	4	8,00
BLOCK III	10	20,00
BLOCK IV	6	12,00



## References

### BASIC REFERENCES

- Ackerman, K. E. & Misra, M. (2018). *Amenorrhoea in adolescent female athletes*. 2(9), 677–688. [https://doi.org/S2352-4642\(18\)30145-7](https://doi.org/S2352-4642(18)30145-7) [pii]
- ACSM. (2014). *Manual ACSM para la valoración y prescripción del ejercicio*. Paidotribo.
- Adam, C., Klissouras, V., Ravazzolo, M., Renson, R. & Tuxworth, W. (1988). *EUROFIT: European test of physical fitness*.
- Andrés, M., Remesal, R., Merino, M. A. & Rivera, F. (2017). *Estilos de vida en jóvenes universitarios: estudios realizados en España en los últimos 5 años*. Universidad de Alicante. Proyecto Universidad Saludable. <http://rua.ua.es/dspace/handle/10045/67129>
- Badillo, J. J. G. & Serna, J. R. (2002). *Bases de la programación del entrenamiento de fuerza* (Vol. 308). Inde.
- Bahr, R., Maehlum, S. & Bolic, T. (2007). *Lesiones deportivas: Diagnóstico, tratamiento y rehabilitación*. Médica Panamericana.
- Behm, D. & Chaouachi, A. (2011). *A review of the acute effects of static and dynamic stretching on performance*. 111(11), 2633–2651.
- Behm, D. & Colado, J. C. (2012). *The effectiveness of resistance training using unstable surfaces and devices for rehabilitation*. 7(2), 226.
- Billat, V. (2002). *Fisiología y metodología del entrenamiento. De la teoría a la práctica* (Vol. 24). Paidotribo.
- BOE. (2011). *Ley 17/2011, de 5 de julio, de seguridad alimentaria y nutrición*. 160, 71283.
- Borg, G. (1961). *Perceived exertion in relation to physical work load and pulse-rate*. Departm. Of Psychiatry, Medical School.
- Borg, G. A. (1982). *Psychophysical bases of perceived exertion*. 14(5), 377–381.
- Bouchard, C., Shephard, R. J., Stephens, T., Sutton, J. R. & McPherson, B. D. (1990). *Exercise, fitness, and health: a consensus of current knowledge: proceedings of the International Conference on Exercise, fitness, and health, May 29-June 3, 1988, Toronto, Canada*. Exercise, fitness, and health: a consensus of current knowledge: proceedings of the International Conference on Exercise, fitness, and health, May 29-June 3, 1988, Toronto, Canada.
- Boushel, R., Gnaiger, E., Calbet, J. A. L., Gonzalez-Alonso, J., Wright-Paradis, C., Sondergaard, H., Ara, I., Helge, J. W. & Saltin, B. (2011). *Muscle mitochondrial capacity exceeds maximal oxygen delivery in humans*. 11(2), 303–307. <https://doi.org/10.1016/j.mito.2010.12.006>
- Bouzas Marins, J. C., Ottoline Marins, N. M. & Delgado Fernández, M. (2010). *Aplicaciones de la frecuencia cardiaca máxima en la evaluación y prescripción de ejercicio*. 45(168), 251–258.
- CAM. (2017). *Mitos, falsedades y realidades en alimentación y nutrición*. <https://www.comunidad.madrid/servicios/salud/mitos-falsedades-realidades-alimentacion-nutricio>
- Campos Granell, J. & Ramón Cervera, V. (2001). *Teoría y planificación del entrenamiento deportivo (LIBRO CD)* (Vol. 24). Editorial Paidotribo.



- Castañer, M. (2001). *El cuerpo: gesto y mensaje no verbal*. 3, 39–49.
- Cholewa, J., Guimarães-Ferreira, L., da Silva Teixeira, T., Naimo, M. A., Zhi, X., de Sá, R. B. D. P., Lodetti, A., Cardozo, M. Q. & Zanchi, N. E. (2014). *Basic Models Modeling Resistance Training: An Update for Basic Scientists Interested in Study Skeletal Muscle Hypertrophy*. 229(9), 1148–1156.
- Cometti, G. (1998). *Los métodos modernos de musculación*. Paidotribo.
- Cometti, G. (2002). *El entrenamiento de la velocidad* (Vol. 24). Editorial Paidotribo.
- Cordero, M. J. A., Piñero, A. O., García, L. B., Segovia, J. P. N., Hernández, M. C. L. & López, A. M. S. (2015). *Efecto rebote de los programas de intervención para reducir el sobrepeso y la obesidad de niños y adolescentes; revisión sistemática*. 32(n06), 2508–2517.
- Cox, R. H. & COX, R. (2008). *Psicología del deporte: conceptos y sus aplicaciones*. Médica Panamericana.
- Crawford, F. (2009). *Athlete's foot*. 2009, 1712. <https://doi.org/1712>
- Cruz-Jentoft, A. J., Bahat, G., Bauer, J., Boirie, Y., Bruyère, O., Cederholm, T., Cooper, C., Landi, F., Rolland, Y., Sayer, A. A., Schneider, S. M., Sieber, C. C., Topinkova, E., Vandewoude, M., Visser, M. & Zamboni, M. (2019). *Sarcopenia: revised European consensus on definition and diagnosis*. 48(1), 16–31. <https://doi.org/10.1093/ageing/afy169>
- de Educación Física, D. (SF). *Salud y actividad física. Efectos positivos y contraindicaciones de la actividad física en la salud y la calidad de vida*.
- De Feo, P. (2013). *Is high-intensity exercise better than moderate-intensity exercise for weight loss?* 23(11), 1037–1042. <https://doi.org/10.1016/j.numecd.2013.06.002>
- Deepak, T. H., Mohapatra, P. R., Janmeja, A. K., Sood, P. & Gupta, M. (2014). *Outcome of pulmonary rehabilitation in patients after acute exacerbation of chronic obstructive pulmonary disease*. 56(1), 7–12.
- Devís, J. D. (2000). *Actividad física, deporte y salud*. Inde.
- Downie, R. S., Tannahill, C. & Tannahill, A. (1996). *Health promotion: models and values* (Vol. 40). Oxford University Press Oxford.
- Dubos, R. J. (1958). *Infection into disease*. 1(4), 425–435.
- Fenstermaker, K. L., Plowman, S. A. & Looney, M. A. (1992). *Validation of the Rockport Fitness Walking Test in females 65 years and older*. 63(3), 322–327.
- Ferreira L. (2019). *Manual BÁSICO Movilización Miofascial Inducida por el Movimiento*. (1a) Ed. Propia/SL.
- Férriz, R., González-Cutre, D., Sicilia, Á. & Beltrán, V. (2018). *Estrategias motivacionales para la promoción de la actividad física en niños y adolescentes desde el contexto escolar* (p. 109). Inde.
- Franks, B. D., Howley, E. T. & Iyriboz, Y. (1999). *The health fitness handbook*. Human Kinetics.
- Garber, C. E., Blissmer, B., Deschenes, M. R., Franklin, B. A., Lamonte, M. J., Lee, I.-M., Nieman, D. C. & Swain, D. P. (2011). *American College of Sports Medicine position stand. Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: guidance for prescribing exercise*. 43(7),



- 1334–1359. <https://doi.org/10.1249/MSS.0b013e318213febf>
- García Manso, J. M., Caballero, J. A. R. & Navarro, M. (1996). *Bases teóricas del entrenamiento deportivo:(principios y aplicaciones)*. Gymnos.
- García-Ramos, A., Pérez-Castilla, A., Garrido-Blanca, G., Delgado-García, G. & Piepoli, A. (2019). *Reliability and concurrent validity of seven commercially available devices for the assessment of movement velocity at different intensities during the bench press*.
- García-Verdugo, M. (2007). *Resistencia y entrenamiento: una metodología práctica*. Paidotribo.
- Grgic, J., Garofolini, A., Orazem, J., Sabol, F., Schoenfeld, B. J. & Pedisic, Z. (2020). *Effects of Resistance Training on Muscle Size and Strength in Very Elderly Adults: A Systematic Review and Meta-Analysis of Randomized Controlled Trials*. 50(11), 1983–1999. <https://doi.org/10.1007/s40279-020-01331-7>
- Guerrero, L. & León, A. (2008). *Aproximación al concepto de salud. Revisión histórica*. 18(53).
- Guillén del Castillo, M. & Linares Girela, D. (2002). *Bases biológicas y fisiológicas del movimiento humano*. Médica Panamericana.
- Guthold, R., Stevens, G. A., Riley, L. M. & Bull, F. C. (2020). *Global trends in insufficient physical activity among adolescents: a pooled analysis of 298 population-based surveys with 1.6 million participants*. 4(1), 23–35. [https://doi.org/10.1016/S2352-4642\(19\)30323-2](https://doi.org/10.1016/S2352-4642(19)30323-2)
- Hackett, D. A. & Chow, C.-M. (2013). *The Valsalva maneuver: its effect on intra-abdominal pressure and safety issues during resistance exercise*. 27(8), 2338–2345. <https://doi.org/10.1519/JSC.0b013e31827de07d>
- Harman, E. A., Rosenstein, R. M., Frykman, P. N. & Nigro, G. A. (1989). *Effects of a belt on intra-abdominal pressure during weight lifting*. 21(2), 186–190.
- Harvey, D. (1998). *Assessment of the flexibility of elite athletes using the modified Thomas test*. 32(1), 68–70.
- Hebert, L. & Miller, G. (1987). *Newer heavy load lifting methods help firms reduce back injuries*. 56(2), 57–60.
- Howe, S. M., Hand, T. M., Larson-Meyer, D. E., Austin, K. J., Alexander, B. M. & Manore, M. M. (2016). *No Effect of Exercise Intensity on Appetite in Highly-Trained Endurance Women*. 8(4), 223.
- Ikeda, E. R., Borg, A., Brown, D., Malouf, J., Showers, K. M. & Li, S. (2009). *The Valsalva maneuver revisited: the influence of voluntary breathing on isometric muscle strength*. 23(1), 127–132. <https://doi.org/10.1519/JSC.0b013e31818eb256>
- INE. (2021). *INE*. [https://www.ine.es/prensa/edcm\\_2020.pdf](https://www.ine.es/prensa/edcm_2020.pdf)
- Isidro, F. (2007). *Manual del entrenador personal. Del fitness al wellness (Color) (Vol. 93)*. Editorial Paidotribo.
- Jiménez Gutiérrez, A. (2005). *Entrenamiento personal: bases, fundamentos y aplicaciones*. INDE.
- Kovacs, F. (2015). *El libro de la espalda. (1a)*. PLANETA.
- KAPANDJI, L. A. (1998). *Cuadernos de fisiología articular. Cuaderno III: Tronco y raquis*. Kim,
- K. & Lee, T. (2016). *Comparison of muscular activities in the abdomen and lower limbs while*





- performing sit-up and leg-raise. 28(2), 491–494. <https://doi.org/10.1589/jpts.28.491> [doi]
- Kim, T. H., Eke Dogra, S., Al-Sahab, B. & Tamim, H. (2014). Comparison of functional fitness outcomes in experienced and inexperienced older adults after 16-week tai chi program. 20(3), 20–25.
- Lagally, K. M. & Robertson, R. J. (2006). Construct validity of the OMNI resistance exercise scale. 20(2), 252–256. <https://doi.org/10.1519/R-17224.1>
- Lander, J. E., Hundley, J. R. & Simonton, R. L. (1992). The effectiveness of weight-belts during multiple repetitions of the squat exercise. 24(5), 603–609.
- Ley Orgánica 3/2013, de 20 de junio, de protección de la salud del deportista y lucha contra el dopaje en la actividad deportiva, (2013).  
<http://www.boe.es/buscar/doc.php?id=BOE-A-2013-6732>
- Liebenson, C. (1999). *Manual de rehabilitación de la columna vertebral (Vol. 88)*. Editorial Paidotribo.
- Lindsey, R. & Corbin, C. (1989). Questionable exercises—some safer alternatives. 60(8), 26–32.
- López Cozar, R. & Rebollo, S. (2002). Análisis de la relación entre práctica deportiva y características sociodemográficas en personas mayores. 2(5), 69–98.
- López Miñarro, P. A. (2001). Ejercicios desaconsejados en la actividad física: detección y alternativas. *Inde*.
- López Miñarro, P. Á. (2002). Mitos y falsas creencias en la práctica deportiva. *Inde*.
- López-Bueno, R., Calatayud, J., Casaña, J., Casajús, J. A., Smith, L., Tully, M. A., Andersen, L. L. & López-Sánchez, G. F. (2020). COVID-19 Confinement and Health Risk Behaviors in Spain. 11, 1426. <https://doi.org/10.3389/fpsyg.2020.01426>
- López-Chicharro, J. & Vicente-Campos, D. (n.d.). HIIT entrenamiento interválico de alta intensidad. *Exercise Physiology and Training*.
- Lucía, A., Pardo, J., Durántez, A., Hoyos, J. & Chicharro, J. L. (1998). Physiological differences between professional and elite road cyclists. 19(5), 342–348.  
<https://doi.org/10.1055/s-2007-971928>
- Mak, W. Y. V. & Lai, W. K. C. (2015). Acute Effect on Arterial Stiffness after Performing Resistance Exercise by Using the Valsalva Manoeuvre during Exertion. 2015.
- Marcén, C. S. (2021). Prevención de la vigorexia: Programa de Educación para la Salud dirigido a adolescentes Prevention of vigorexia: Health Education Program for adolescents. Universidad de Zaragoza.
- Marfell-Jones, M., Olds, T., Stewart, A. & Carter, J. (2006). *International Standards for Anthropometric Assessment*.
- McGill, S. M., Childs, A. & Liebenson, C. (1999). Endurance times for low back stabilization exercises: clinical targets for testing and training from a normal database. 80(8), 941–944.
- Mendoza, R. (1988). Los escolares y la salud: estudio de los hábitos de los escolares españoles en relación con la salud. Ministerio de Sanidad y Consumo.
- Myers, W., T. (2015). *Vías anatómicas. Meridianos miofasciales para terapeutas manuales y*



- profesionales del movimiento. (2a). Elsevier España, S.L.U.
- MSCBS. (2022). *Informe Anual del Sistema Nacional de Salud*.  
[https://www.sanidad.gob.es/estadEstudios/estadisticas/sisInfSanSNS/tablasEstadisticas/InfAnualSNS2020\\_21/INFORME\\_ANUAL\\_2020\\_21.pdf](https://www.sanidad.gob.es/estadEstudios/estadisticas/sisInfSanSNS/tablasEstadisticas/InfAnualSNS2020_21/INFORME_ANUAL_2020_21.pdf)
- Müller, D. C., Boeno, F. P., Izquierdo, M., Aagaard, P., Teodoro, J. L., Grazioli, R., Cunha, G., Ferrari, R., Saez de Astasu, M. L., Pinto, R. S. & Cadore, E. L. (2021a). *Effects of high-intensity interval training combined with traditional strength or power training on functionality and physical fitness in healthy older men: A randomized controlled trial*. 149, 111321.  
<https://doi.org/10.1016/j.exger.2021.111321>
- Mura, G. & Carta, M. G. (2013). *Physical activity in depressed elderly. A systematic review*. 9, 125–135. <https://doi.org/10.2174/1745017901309010125>
- Murray, A. & Cardinale, M. (2015). *Cold applications for recovery in adolescent athletes: a systematic review and meta analysis*. 4(1), 1.
- Naclerio Ayllón, F. (2009). *Evaluación de la Fuerza muscular con ejercicios de musculación* (G. H. Castañeda (ed.); pp. 309–337). Paidotribo. Navarro, F. (1998). *La resistencia*. Gymnos.
- Nordby, P., Rosenkilde, M., Ploug, T., Westh, K., Feigh, M., Nielsen, N. B., Helge, J. W. & Stallknecht, B. (2015). *Independent effects of endurance training and weight loss on peak fat oxidation in moderately overweight men: a randomized controlled trial*. 118(7), 803–810.  
<https://doi.org/10.1152/jappphysiol.00715.2014>
- Oliver-Martínez, P. A., Ramos-Campo, D. J., Martínez-Aranda, L. M., Martínez-Rodríguez, A. & Rubio-Arias, J. Á. (2020). *Chronic effects and optimal dosage of strength training on SBP and DBP: a systematic review with meta-analysis*. 38(10), 1909–1918.  
<https://doi.org/10.1097/HJH.0000000000002459>
- OMS. (2018). *Actividad física*.  
<https://www.who.int/es/news-room/fact-sheets/detail/physical-activity>
- Organization, W. H. (2004). *Resolución WHA57. 17. 57*.
- Ortega, F. B., Ruiz, J. R., España-Romero, V., Vicente-Rodríguez, G., Martínez-Gómez, D., Manios, Y., Béghin, L., Molnar, D., Widhalm, K., Moreno, L. A., Sjöström, M. & Castillo, M. J. (2011). *The International Fitness Scale (IFIS): usefulness of self-reported fitness in youth*. 40(3), 701–711. <https://doi.org/10.1093/ije/dyr039>
- Panjabi, M. M. (1992). *The stabilizing system of the spine. Part I. Function, dysfunction, adaptation, and enhancement*. 5(4), 383–389; discussion 397.
- Parsons, J. K. (2014). *Prostate cancer and the therapeutic benefits of structured exercise*. 32(4), 271–272. <https://doi.org/10.1200/JCO.2013.53.4289> [doi]
- Pastor, J. (n.d.). *¿Salud para durar o bienestar para vivir?* (J. Pastor (ed.); pp. 55–77). Wanceulen.
- Pérez, V. (n.d.). *La Educación Física y la Salud desde la perspectiva del bienestar* (J. Pastor (ed.); pp. 79–98). Wanceulen.
- Randell, R. K., Rollo, I., Roberts, T. J., Dalrymple, K. J., Jeukendrup, A. E. & Carter, J. M.



(2017).

*Maximal Fat Oxidation Rates in an Athletic Population.* 49(1), 133–140.

<https://doi.org/10.1249/MSS.0000000000001084>

Rankinen, T., Zuberi, A., Chagnon, Y. C., Weisnagel, S. J., Argyropoulos, G., Walts, B., Pérusse,

L. & Bouchard, C. (2006). *The human obesity gene map: the 2005 update.* 14(4), 529–644.

<https://doi.org/10.1038/oby.2006.71>

Rikli, R. E. & Jones, C. J. (1999). *Development and validation of a functional fitness test for community-residing older adults.* 7, 129–161.

Robertson, R. J., Goss, F. L., Rutkowski, J., Lenz, B., Dixon, C., Timmer, J., Frazee, K., Dube, J. &

Andreacci, J. (2003). *Concurrent validation of the OMNI perceived exertion scale for resistance exercise.* 35(2), 333–341. <https://doi.org/10.1249/01.MSS.0000048831.15016.2A>

Rodríguez Marín, J. (1995). *Psicología social de la salud. Síntesis.*

Ruiz, A. (1990). *Fuerza y Musculación: "Sistemas de Entrenamiento."* Agonos.

Russell, A. P., Foletta, V. C., Snow, R. J. & Wadley, G. D. (2014). *Skeletal muscle mitochondria: a major player in exercise, health and disease.* 1840(4), 1276–1284.

Salleras Sanmartí, L. (1985). *Educación sanitaria: principios, métodos y aplicaciones.* Díaz de Santos.

Sánchez García, A. (2019). *Trastornos de la conducta alimentaria en adolescentes: etiología y actuación enfermera.*

Schwindling, S., Scharhag-Rosenberger, F., Kindermann, W. & Meyer, T. (2014). *Limited benefit*

*of Fatmax-test to derive training prescriptions.* 35(4), 280–285.

<https://doi.org/10.1055/s-0033-1349106>

Selye, H. (1978). *The stress of police work.* 1(1), 7-8.

Serra Grima, J. R. & Begur Calafat, C. (2004). *Prescripción de ejercicio físico para la salud* (Vol.

1). Editorial Paidotribo.

Sillero Quintana, M. (2009). *Antropometría aplicada al entrenamiento personal* (G. H. Castañeda (ed.); pp. 339–374). Paidotribo.

Silva Piñeiro, R. & Mayán Santos, J. M. (2016). *Beneficios psicológicos de un programa proactivo de ejercicio físico para personas mayores.* 9(1), 24–32.

Skrypnik, D., Bogdanski, P., Madry, E., Pupek-Musialik, D. & Walkowiak, J. (2014). *Effect of physical exercise on endothelial function, indicators of inflammation and oxidative stress.* 36(212), 117–121.

Swain, D. P., Brawner, C. A. & Medicine, A. C. of S. (2012). *ACSM's resource manual for guidelines for exercise testing and prescription.* Lippincott Williams & Wilkins.

Tesch, P. A., Fernandez-Gonzalo, R. & Lundberg, T. R. (2017). *Clinical Applications of Iso-Inertial, Eccentric-Overload (YoYo™) Resistance Exercise.* 8, 241.



<https://doi.org/10.3389/fphys.2017.00241>

Trojian, T. & McKeag, D. (2006). Single leg balance test to identify risk of ankle sprains. *40(7)*, 610–613; discussion 613. <https://doi.org/10.1136/bjsm.2005.024356>

Tuesca Molina, R. (2005). La calidad de vida, su importancia y cómo medirla. *21. UE.* (2022).

Vivifrail – Exercise for elderly adults. <https://vivifrail.com/es/inicio/>

Velasco-Santos, L., Pradillo, J. L. P., Blanco-Alcántara, D. & Eguizábal, A. J. (2021). Influencia del perfil de los jóvenes en sus valores del cuerpo (Influence of the profile of young people on their body values). *41*, 299–309.

Vera-García, F. J., Monfort, M. & Sarti, M. A. (2005). Prescripción de programas de entrenamiento abdominal. *Revisión y puesta al día.* *81*, 38–46.

Weineck, J. (2000). *Salud, ejercicio y deporte (Vol. 1).* Editorial Paidotribo.

Wells, K. F. & Dillon, E. K. (1952). The sit and reach—a test of back and leg flexibility. *23(1)*, 115–118.

Wilke, J., Krause, F., Vogt, L., & Banzer, W. (2016). What Is Evidence-Based About Myofascial Chains: A Systematic Review. *Archives of Physical Medicine and Rehabilitation*, *97(3)*, 454-461. <https://doi.org/10.1016/j.apmr.2015.07.023>

Wimbush, J. C. & Shepard, M. (1994). Toward an Understanding of Ethical Climate: Its Relationship to Ethical Behavior and Supervisory Influence. *13*, 637–647.