Health and movement science Stage 6 (Year 12)

The impact of sleep, nutrition and supplementation on performance – sample program of learning

Contents

[Overview 2](#_Toc168576052)

[Syllabus 2](#_Toc168576053)

[Outcomes 2](#_Toc168576054)

[Content 2](#_Toc168576055)

[Learning sequence 1 – What impact does sleep, nutrition and supplementation have on movement and performance? 4](#_Toc168576056)

[Learning intentions and success criteria 4](#_Toc168576057)

[Sports nutrition 5](#_Toc168576058)

[Research activities 8](#_Toc168576059)

[Supplementation 10](#_Toc168576060)

[Research activity 10](#_Toc168576061)

[Sports nutrition case study 11](#_Toc168576062)

[Sleep 12](#_Toc168576063)

[Improving athlete performance with nutrition, sleep and hydration 15](#_Toc168576064)

[Resources 18](#_Toc168576065)

[Further reading 19](#_Toc168576066)

[Additional information 20](#_Toc168576067)

[Support and alignment 20](#_Toc168576068)

[References 22](#_Toc168576069)

This resource has been developed to assist teachers in NSW Department of Education schools to create learning that is contextualised to their classroom. It can be used as a basis for the teacher’s own program, assessment, or scope and sequence, or be used as an example of how the new curriculum could be implemented. The resource has suggested timeframes that may need to be adjusted by the teacher to meet the needs of their students.

# Overview

This learning program is intended to be completed in Year 12 as part of Focus area 2 – Training for improved performance.

Five hours have been allocated to this program of learning.

# Syllabus

The following syllabus outcomes and content is addressed if all the teaching activities are completed. Teachers are to use their professional judgement to ensure that the suggested syllabus content is addressed.

## Outcomes

A student:

* investigates factors that impact movement and performance **HM-12-04**
* analysis: critically analyses the relationships and implications of health and movement concepts **HM-12-06**
* problem-solving: proposes and evaluates solutions to complex health and movement issues **HM-12-09**

[Health and Movement Science 11–12 Syllabus](https://curriculum.nsw.edu.au/learning-areas/pdhpe/health-and-movement-science-11-12-2023/overview) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2023.

## Content

**Focus area 2**

What impact does sleep, nutrition and supplementation have on movement and performance?

* Using research, analyse the dietary requirements, pre, during and post performance needed and fluid intake requirements of athletes from different sports
* Explain how sleep, nutrition and hydration can be used to reduce fatigue and positively influence movement and injury prevention

Including:

* guidelines
* planning
* routines
* monitoring
* Discuss the use of supplements, micronutrients, protein, caffeine and creatine products for improved performance

# Learning sequence 1 – What impact does sleep, nutrition and supplementation have on movement and performance?

This learning sequence is designed to be delivered across 5 hours. There is flexibility to alter this timeline and make any necessary adjustments according to needs and context.

Before undertaking this learning sequence, students should have demonstrated a sound understanding of:

* the ATP-PCr, Glycolytic (Lactic Acid) and Aerobic energy systems of the body including fuel source and efficiency of ATP production, duration, intensity and rate of recovery, causes of fatigue and interplay of the energy systems
* the role nutrition plays in enabling the energy systems to function efficiently, including macronutrient and micronutrient requirements of active people.

Opportunities for reflection and adjustments can be made depending on student interest.

## Learning intentions and success criteria

**Explicit teaching note:** learning intentions and success criteria are most effective when they are contextualised to meet the needs of students in the class. The examples provided in this document are generalised to demonstrate how learning intentions and success criteria could be created.

Students will:

* analyse the nutritional requirements of athletes from different sports
* draw connections to the nutritional requirements for the energy systems covered in Year 11
* develop an understanding of the interconnected nature of sleep, nutrition and hydration
* apply knowledge of sleep, nutrition and hydration to different sports and age groups.

## Sports nutrition

Present the following scenario to the class:

Theodore is a 20-year-old man who walks 30 minutes a day to and from the bus stop, goes to the gym 3 times a week to a strength and conditioning class, eats a nutritious, well-balanced diet and drinks 2 litres of water a day. He gets on average 7 hours of sleep per night and considers himself in good health.

Pose the following question to the class to draw out how the general implications of nutrition, supplementation, sleep and hydration reduce fatigue, and positively influence movement and injury prevention.

* If Theodore were to become an athlete, brainstorm the changes to his nutrition, sleep and hydration that would need to be considered and why.

Possible areas for class discussion might include:

* an increase in physical activity would mean he needs to consume more food or calories in general to be able to physically perform
* depending on his sport, he might need to increase his intake of protein to support muscle growth, reduce physiological fatigue and maximise performance
* he might need to consider supplementation if he is unable to meet his protein goals
* depending on his sport, he might also consider other supplements such as caffeine to enhance performance
* he will need to increase his water intake to match any loss of water from sweat and metabolic processes during training and performance to avoid the effects of dehydration
* if he is undergoing high intensity training, he might benefit from more sleep for his body to rest and repair
* adequate sleep will mean he is less likely to experience mental and physical fatigue which could otherwise lead to injury.

Explain to students that to fuel the body we need nutrients. These nutrients can be defined as macronutrients and micronutrients. Macronutrients are those required in large amounts. For example, carbohydrates, protein, fat, dietary fibre and water, whereas micronutrients are required in small amounts, for example, vitamins and minerals.

Students work in small groups to research the dietary sources, role in the body and impact on physical performance of different macronutrients and micronutrients. Students use the tables below to organise their information.

Table 1 – macronutrient dietary sources, role and impact on performance

|  |  |  |  |
| --- | --- | --- | --- |
| Macronutrient | Examples of dietary source | Role in the body | Impact on physical performance |
| Carbohydrate |  |  |  |
| Protein |  |  |  |
| Fat |  |  |  |
| Dietary fibre |  |  |  |
| Water |  |  |  |

Table 2 – micronutrient dietary sources, role and impact on performance

|  |  |  |  |
| --- | --- | --- | --- |
| Micronutrient | Examples of dietary source | Role in the body | Impact on physical performance |
| Vitamin C |  |  |  |
| B vitamins |  |  |  |
| Calcium |  |  |  |
| Iron |  |  |  |
| Magnesium |  |  |  |

**Note:** to support students in linking previous concepts taught in Year 11, a guided revision of the sources of fuel used by the different energy systems with a focus on aligning the relevant macronutrients to the energy systems is suggested.

Explain to students that the [Australian Dietary Guidelines](https://www.eatforhealth.gov.au/guidelines/guidelines) states that the recommended relative macronutrient distribution for Australians is:

* 45 to 65% from carbohydrate
* 15 to 25% from protein
* 20 to 35% of total energy intake from fat.

Students work in small groups to research the guidelines for endurance athletes and power-based athletes, taking notes on how the guidelines vary and why. Students use the table below to organise their information.

Table 3 – recommended relative macronutrient distribution comparison for endurance and power-based athletes

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Macronutrient | General guidelines | Endurance athletes | Power-based athletes | Reasons for differences |
| Carbohydrate | 45–65% |  |  |  |
| Protein | 15–25% |  |  |  |
| Fat | 20–35% |  |  |  |

Highlight to students the importance of water as a macronutrient in ensuring adequate hydration for performance and include the issues of dehydration and over-hydration. Sample points might include:

* the role of fluid in temperature regulation via sweating
* the role of fluid in maintaining healthy blood volume, preventing the blood from becoming viscous which decreases stroke volume and impacts circulation of oxygen to working muscles and removal of waste products
* dehydrated athletes experience symptoms such as increased rate of perceived exertion, impaired skill execution and impacted decision making which affects performance and increases risk of injury
* drinking too much fluid can also impact performance negatively as well as having negative health consequences. Over-hydration dilutes levels of sodium in the bloodstream which leads to fluid imbalances in the body’s cells. Symptoms include headaches and disorientation but can also lead to death in severe cases.

### Research activities

Students individually complete the following research activities to gain a better understanding of hydration and sport-specific nutrition.

Students visit the Sports Dietitians Australia webpage, [Why is hydration important? The effect of dehydration on performance](https://www.sportsdietitians.com.au/factsheets/fuelling-recovery/why-is-hydration-important-the-effect-of-dehydration-on-performance/) and answer the following:

* Outline the ‘Weight, Urine, Thirst’ (WUT) model for monitoring an athlete’s hydration.
* Outline the method to determine how much fluid is needed post-exercise to fully rehydrate.
* Alex is an AFL player who has just finished playing a pre-season trial match. He weighed himself prior to the game at 95 kg, post-game he weighed in at 93.3 kg.
* How much fluid did Alex lose during the game?
* How much fluid should Alex consume to ensure he is fully rehydrated within 60 minutes of completing the game?
* In pairs, students design a checklist that could be used by coaching staff on Alex’s team to monitor the hydration of athletes and prevent dehydration during training and games.

Students visit the following Sports Dietitians Australia webpage, [Food for your sport](https://www.sportsdietitians.com.au/section/food-for-your-sport/) and choose 2 sports with different energy requirements (one endurance sport and one power-based sport) from the website to research. They are to research the dietary and fluid requirements, timings and examples of foods for pre, during and post performance. Students are to collate their findings in the table below:

Table 4 – pre, during and post performance nutrition and fluid requirements

|  |  |  |
| --- | --- | --- |
| Timing | Dietary and fluid requirements | Example of food or fluid to be consumed and specific timing |
| Pre performance |  |  |
| During performance |  |  |
| Post performance |  |  |

Students individually answer the following question:

* Explain the difference between ‘training nutrition’ and ‘competition nutrition’.

Students engage in a [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645?clearCache=31eee359-a25e-24f9-d8a7-12c8e6f95f56) activity to develop a success criteria for the following question:

* Compare the pre, during and post performance nutrition and hydration requirements for TWO sports.

Students individually write a response to the question above. Using the final, agreed-upon criteria from the previous Think-Pair-Share activity, students engage in a peer assessment of their partner’s response, providing written feedback aligning to the success criteria.

**Formative assessment opportunity – outcome HM-12-04**

Students will evidence their knowledge and understanding gathered from investigating and comparing the pre, during and post performance nutritional requirements of 2 sports and how this impacts movement and performance.

Students use the feedback gained from the peer-assessment activity to refine and submit their written response to the question: Compare the pre, during and post performance nutrition and hydration requirements for TWO sports.

## Supplementation

Explain to students that in some circumstances, elite athletes might also choose to engage in supplementation to improve their performance.

### Research activity

Students in small groups are to complete an analysis of popular supplements. They are to access the following websites and collate their findings using the table below.

* Sports Dietitians Australia – [Supplements](https://www.sportsdietitians.com.au/section/supplements/)
* Australian Institute of Sport – [Supplements](https://www.ais.gov.au/nutrition/supplements)

Table 5 – analysis of supplements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Supplement | What is it and how is it taken? | Who does it benefit? | Potential positive impacts | Potential negative impacts |
| Protein |  |  |  |  |
| Creatine |  |  |  |  |
| Caffeine |  |  |  |  |
| Branched-chain amino acids (BCAAs) |  |  |  |  |
| Beta-alanine |  |  |  |  |
| Dietary nitrate, for example, beetroot juice |  |  |  |  |

**Formative assessment opportunity – outcome HM-12-06**

Students apply their knowledge and understanding of a range of supplements to critically analyse the health and movement implications of the use of supplementation in 2 different sports. Students are to make judgements about the use of these supplements through considering the positive and negative implications of using these supplements, applying this to sport-specific contexts.

Using the 2 sports researched earlier, students complete and submit a written response to the question: Evaluate the use of supplementation in TWO different sports.

### Sports nutrition case study

Provide students with the following case study and answer the questions that follow.

**Part A**

You have been appointed as the sports nutritionist for the Australian Men’s Rugby 7s team. The sport is an abbreviated form of rugby played with 7 per side on a full-sized rugby field. Each game consists of two 7-minute halves of high intensity and significant physical contact. You have been asked to develop a nutrition plan for their competition weekends, with the plan starting on Thursday, the day before competition, and ending on Sunday evening, after the conclusion of the competition. The game schedule for the upcoming Sydney 7s competition has been released and the 6 games are being played at the following times:

Friday – 5:30 pm, 8:56 pm

Saturday – 1:20 pm, Quarter final 5:35 pm

Sunday – Semi-final 1:40 pm, Final 3:28 pm

Temperatures are expected to be on average 33 degrees Celsius with high humidity. You have also been informed that 2 athletes are vegetarian.

* Propose and justify a nutrition plan, including hydration, for the upcoming Sydney 7s tournament including vegetarian meal options.
* Students discuss and compare their plan with a partner.

Class discussion:

* What were the main similarities noted between plans?
* What were the key differences noted between plans?

**Note:** this is an opportunity to check students’ understanding and to encourage students to reflect on and critique their own, and their peer’s, plan. The teacher should draw out the implications of the specific structure of the event and the requirements of the sport in determining the nutrition plan.

Students return to their partner to read and complete the questions for Part B of the case study.

**Part B**

Due to your extremely well-thought-out nutrition plan, and the success of the Australian Men’s 7s team, Rugby Australia have asked you to modify your nutrition plan for the upcoming Global Youth 7s tournament for the U18 girls’ and boys’ teams. There will be a very similar schedule for this competition.

Students are to individually access and read the Sports Dietitians Australia factsheet [Nutrition for the adolescent athlete](https://www.sportsdietitians.com.au/factsheets/across-the-lifespan/nutrition-for-the-adolescent-athlete/). They are to rejoin with their partner and apply their knowledge to co-write a response to the following question:

* Propose and justify the adjustments that you would make to the nutrition plan to cater for adolescent athletes.

**Note:** alternatively, students could complete the same activity for masters athletes using the Sports Dietitians Australia factsheet [Nutrition for masters athletes](https://www.sportsdietitians.com.au/factsheets/across-the-lifespan/nutrition-for-masters-athletes/), or for young children using the Sports Dietitians Australia factsheet [Nutrition for the junior athlete](https://www.sportsdietitians.com.au/factsheets/across-the-lifespan/nutrition-for-the-junior-athlete/).

## Sleep

Students individually brainstorm what they already know about the benefits of sleep. Using coloured highlighters or pens, students are to colour code whether the benefit aligns to one or more of the following applications for athletes: reducing fatigue, positively influencing movement, preventing injury.

Students in small groups are to complete a [jigsaw activity](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/546?clearCache=97439229-664f-eab3-7b23-c471ee7b9552). Students allocate the following articles among their group to individually read:

* Australian Institute of Sport – [Sleep (PDF 219 KB)](https://www.clearinghouseforsport.gov.au/kb?a=815707)
* Gatorade Sports Science Institute – [Sleep and athletes](https://www.gssiweb.org/sports-science-exchange/article/sse-167-sleep-and-athletes)
* Nike: Health & Wellness – [Why Is Sleep So Important for Athletic Recovery? Experts Explain](https://www.nike.com/au/a/why-is-sleep-important)
* Sleep Foundation – [Sleep, Athletic Performance, and Recovery](https://www.sleepfoundation.org/physical-activity/athletic-performance-and-sleep)
* Sports Osteopaths Australia – [The Connection Between Lack of Sleep and Injuries](https://sportsosteopaths.com.au/learning-centre/the-connection-between-lack-of-sleep-and-injuries#:~:text=Sleep%20fortifies%20the%20immune%20system%2C%20helping%20to%20prevent,of%20blood%20vessel%20injury%20and%20strengthens%20the%20body.)
* The Sports Institute – [Impacts of Sleep on Athletic Performance](https://thesportsinstitute.com/impacts-of-sleep-on-athletic-performance/).

Students individually collate their findings from their reading by placing relevant information under the following headings:

* Sleep guidelines
* Impact on fatigue
* Impact on performance
* Impact on injury
* Additional impacts
* Barriers to getting adequate sleep for athletes
* Strategies to improve duration and quality of sleep for athletes.

**Note:** the provision of a scaffold for students to make notes from the readings ensures students are effectively supported to interpret and classify the information that they are reading. This supports students to work towards analysing the content.

Students present their findings to their group and collate the information in their own notes. They are to share with the class what they believe to be the most significant impacts of sleep on fatigue, performance and injury.

**Note:** by asking students to make a judgement about the most significant impacts, students practise critical analysis of these concepts and build the skills required to respond to higher order, complex questions requiring assessment, evaluation or critical analysis.

Next, students engage in a small group discussion addressing the question:

* To what extent does adequate sleep reduce psychological and physiological fatigue, positively influence movement, and help to prevent injury?

To build on the responses from the jigsaw activity, conduct a class discussion further exploring the barriers for athletes getting adequate sleep. Some discussion areas might include travelling to different time zones, jet lag, sleeping in different beds and in different climatic conditions, training schedules that might be very late or very early, stress and anxiety about performance, excitement of travelling with a team, and changes in the types of foods that are available which might cause discomfort.

As a class, brainstorm the strategies and technologies that can be used to support athletes to achieve the required amount of sleep and overcome the barriers athletes might experience.

**Formative assessment opportunity – outcome HM-12-04**

Students evidence their knowledge and understanding from investigating sleep guidelines, ways of planning and monitoring sleep, and routines to promote good sleep, additionally making the connection to the impact that sleep has on movement and performance.

Students are to write an article to be featured in the NSW Institute of Sport e-Newsletter and published on their website, that is targeted to elite athletes and addresses the following:

* sleep guidelines
* performance benefits of sleep for athletes
* how to plan for adequate sleep and monitor the duration and quality of sleep
* propose strategies and routines to support adequate duration and quality of sleep.

**Note:** students should be supported in developing literacy skills to write for this specific context, considering the target audience, structure of a news article, appropriate vocabulary, incorporation of facts and evidence.

## Improving athlete performance with nutrition, sleep and hydration

Students create a profile for an elite athlete from a sport of their choice, including their age, sex, sport and position (if relevant).

Students design a week-long schedule for the athlete to follow during a training week that reflects appropriate nutrition, hydration, sleep and supplementation.

**Note:** the following table provides an example of how one day of the week-long schedule might be represented. This might look different depending on the sport chosen.

Table 6 – example table to record athlete’s week-long schedule

|  |  |
| --- | --- |
| Monday’s schedule | Details |
| Wake time |  |
| One hour pre-training meal and hydration |  |
| Training session focus |  |
| Immediate post-training meal and hydration |  |
| Lunch |  |
| One hour pre-training meal and hydration |  |
| Training session focus |  |
| Immediate post-training meal and hydration |  |
| Dinner |  |
| Supper |  |
| Bed time |  |

**Note:** to simplify this activity, the teacher could provide students with a training schedule for an athlete from a predetermined sport and the students could add a schedule for nutrition, hydration, sleep and supplementation.

Students swap their schedule with a partner and engage in a discussion by asking probing questions about the program and providing peer feedback. Some discussion prompts might include questions relating to:

* food and supplement choices
* the timing of food consumption
* the timing of training activities in the schedule
* the routines that are evident such as pre-sleep routines.

**Note:** this activity provides students with the opportunity to justify the decisions they have made in designing their week-long schedule with reference to their knowledge and understanding of nutrition, supplementation, hydration and sleep. It also allows for the provision of formative feedback on the schedule and their justification prior to the student writing a response on it, and the opportunity for self-reflection.

**Formative assessment opportunity – outcome HM-12-09**

Students evidence problem-solving skills as they propose and justify an athlete’s week-long schedule that provides solutions to the complex needs of the athlete in relation to nutrition, hydration, sleep and supplementation.

Students complete and submit the following response.

Students individually write a justification of the week-long schedule that they have developed with reference to:

* the guidelines that have been reflected
* reasoning for specific routines (for example, post-training fuelling timing, pre-sleep routines).

As a class discuss how this schedule can be monitored by the athlete and coaching staff, and why it is important to monitor whether the schedule is being followed. Some potential points for discussion might include:

* monitoring might occur formally or informally
* objective monitoring of nutrition and sleep could occur with phone apps
* journals might be used by the players to monitor any aspects of the schedule they have not met; however, this could be subjective
* questionnaires could be provided to players each day or week about how they are feeling to determine how effective the schedule is
* coaching staff could conduct player observations to monitor players’ energy levels
* monitoring is important to support the best possible performance by the player and for injury reduction
* if a schedule is not working for an athlete, it might need to be adjusted to continue to support their health, wellbeing and performance.

# Resources

Below is a list of suggested resources to support students with this learning sequence. All resources should be reviewed to ensure the suitability for your students.

* Australian Institute of Sports – [Sleep (PDF 219 KB)](https://www.clearinghouseforsport.gov.au/kb?a=815707)
* Australian Institute of Sports – [Supplements](https://www.ais.gov.au/nutrition/supplements)
* Gatorade Sports Science Institute – [Sleep and athletes](https://www.gssiweb.org/sports-science-exchange/article/sse-167-sleep-and-athletes)
* National Health and Medical Research Council – [Australian Dietary Guidelines](https://www.eatforhealth.gov.au/guidelines/guidelines)
* Nike: Health & Wellness – [Why Is Sleep So Important for Athletic Recovery? Experts Explain](https://www.nike.com/au/a/why-is-sleep-important)
* Sleep Foundation – [Sleep, Athletic Performance, and Recovery](https://www.sleepfoundation.org/physical-activity/athletic-performance-and-sleep)
* Sports Dietitians Australia – [Factsheets](https://www.sportsdietitians.com.au/factsheets/)
* Food for your sport
* Nutrition for Masters Athletes
* Nutrition for the Adolescent Athlete
* Nutrition for the Junior Athlete
* Supplements
* Why is hydration important? The effect of dehydration on performance
* Sports Osteopaths Australia – [The Connection Between Lack of Sleep and Injuries](https://sportsosteopaths.com.au/learning-centre/the-connection-between-lack-of-sleep-and-injuries#:~:text=Sleep%20fortifies%20the%20immune%20system%2C%20helping%20to%20prevent,of%20blood%20vessel%20injury%20and%20strengthens%20the%20body.)
* The Sports Institute – [Impacts of Sleep on Athletic Performance](https://thesportsinstitute.com/impacts-of-sleep-on-athletic-performance/)

# Further reading

CESE (Centre for Education Statistics and Evaluation) (2020a) [*What works best: 2020 update*](https://education.nsw.gov.au/about-us/educational-data/cese/publications/research-reports/what-works-best-2020-update), NSW Department of Education, 2 April 2024.

CESE (Centre for Education Statistics and Evaluation) (2020b) [*What works best in practice*](https://education.nsw.gov.au/about-us/educational-data/cese/publications/practical-guides-for-educators-/what-works-best-in-practice), NSW Department of Education, accessed 2 April 2024.

Wiliam D (2013) ‘[Assessment: The bridge between teaching and learning](https://www.researchgate.net/publication/258423377_Assessment_The_bridge_between_teaching_and_learning)’, Voices from the Middle, 21(2):15–20, accessed 2 April 2024.

# Additional information

The information below can be used to support teachers when using this teaching resource for Health and movement science.

## Support and alignment

**Resource evaluation and support:** all curriculum resources are prepared through a rigorous process. Resources are periodically reviewed as part of our ongoing evaluation plan to ensure currency, relevance and effectiveness. For additional support or advice contact the PDHPE Curriculum team by emailing PDHPEcurriculum@det.nsw.edu.au.

**Differentiation:** further advice to support Aboriginal and/or Torres Strait Islander students, EAL/D students, students with a disability and/or additional needs and High Potential and gifted students can be found on the [Planning, programming and assessing 7–12](https://education.nsw.gov.au/teaching-and-learning/curriculum/planning-programming-and-assessing-k-12/planning-programming-and-assessing-7-12) webpage. This includes the [Inclusion and differentiation advice 7–10](https://education.nsw.gov.au/teaching-and-learning/curriculum/planning-programming-and-assessing-k-12/planning-programming-and-assessing-7-12/inclusion-and-differentiation-advice-7-10) webpage.

**Explicit teaching:** further advice to support explicit teaching is available on the [Explicit teaching](https://education.nsw.gov.au/teaching-and-learning/curriculum/explicit-teaching) webpage. This includes the CESE [Explicit teaching – Driving learning and engagement](https://education.nsw.gov.au/about-us/education-data-and-research/cese/publications/research-reports/what-works-best-2020-update/explicit-teaching-driving-learning-and-engagement) webpage.

**Alignment to system priorities and/or needs:** [School Excellence Policy](https://education.nsw.gov.au/policy-library/policies/pd-2016-0468), [Our Plan for NSW Public Education](https://education.nsw.gov.au/about-us/strategies-and-reports/plan-for-nsw-public-education).

**Alignment to the School Excellence Framework:** this resource supports the [School Excellence Framework](https://education.nsw.gov.au/inside-the-department/directory-a-z/strategic-school-improvement/school-excellence-framework) elements of curriculum (curriculum provision) and effective classroom practice (lesson planning, explicit teaching).

**Alignment to Australian Professional Teaching Standards:** this resource supports teachers to address [Australian Professional Teaching Standards](https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/meeting-requirements/the-standards/proficient-teacher) 3.2.2, 3.3.2.

**Consulted with:** Curriculum and Reform and subject matter experts

**NSW syllabus:** Health and Movement Science 11–12 Syllabus

**Syllabus outcomes:** HM-12-04, HM-12-06, HM-12-09

**Author:** PDHPE Curriculum Team

**Publisher:** State of NSW, Department of Education

**Resource:** Learning program

**Related resources:** further resources to support health and movement science Stage 6 can be found on the [Planning, programming and assessing PDHPE 11–12](https://education.nsw.gov.au/teaching-and-learning/curriculum/pdhpe/planning-programming-and-assessing-pdhpe-k-12/planning-programming-and-assessing-pdhpe-11-12) curriculum webpage and the [HSC hub](https://hschub.nsw.edu.au/).

**Professional learning:** relevant professional learning is available through the [PDHPE Statewide staffroom](https://teams.microsoft.com/l/team/19%3A93bb42a54e4b4779b28ab5b737b9e642%40thread.tacv2/conversations?groupId=d759a943-a680-4d0b-bdfe-88a8998f709e&tenantId=05a0e69a-418a-47c1-9c25-9387261bf991).

**Creation date:** 2 April 2024

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# References

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National Health and Medical Research Council (2013) [*Australian Dietary Guidelines*](https://www.eatforhealth.gov.au/guidelines/guidelines), Eat for Health website, accessed 2 April 2024.

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