



# ARE YOU AN ATHLETE WHO IS CURRENTLY PREGNANT?



## MEDICAL CHECK-UPS

Prioritise an appointment with your Sports Doctor or Health Care Professional (e.g., General Practitioner, Midwife, Obstetrician) to discuss the following;

- > Your pregnancy plan
- > How to best manage current health conditions
- > Safety of current medications and supplements, including compliance with WADA
- > Supplements to consider such as folate, iodine, iron and vitamin D
- > Pelvic floor health and potential referral to a Women's Health Physiotherapist

You should also make an appointment with your Sports Doctor or Health Care Professional if:

- > You have a medical concern or have concerns about performing exercise
- > You are having difficulty eating or drinking because of continued nausea and/or vomiting
- > You experience any pelvic floor symptoms such as incontinence (leaking urine, wind or faeces), prolapse (dragging, bulging or heaviness sensation in the vagina), persistent bladder urgency/pressure or pelvic pain.
- > You are experiencing continued musculoskeletal pain (e.g., lower back or pelvic girdle pain)
- > You are experiencing reduced foetal movements or have concerns regarding your pregnancy or baby



## EXERCISE

Exercising while pregnant in accordance with the [Australian evidence-based physical activity guidelines for pregnant women](#) is SAFE, has HEALTH BENEFITS for the mother and her child and REDUCES THE RISK of some pregnancy-related complications (e.g., gestational diabetes, preeclampsia).

There is **LIMITED** evidence to guide exercise prescription for pregnant elite athletes. There is **NO KNOWN SAFE UPPER LIMIT** to exercise intensity or duration. If **EXCEEDING** the recommended amount of exercise (high intensity >90% of woman's maximum heart rate, duration >60 min and/or high volume >300 min), seek advice from an appropriately qualified Health Care Professional.

**DO NOT** ignore any of the following signs and symptoms that may put your pregnancy at risk. These include chest pain, persistent excessive shortness of breath that does not resolve with rest, regular painful uterine contractions, persistent loss of fluid and/or bleeding from the vagina, severe headache or persistent dizziness / feeling faint that does not resolve with rest.

A small number of women may develop medical conditions (contraindications) where exercise may not be recommended. These conditions can be pre-existing or develop at any point during your pregnancy. Depending on the contraindication, you may be recommended to continue, modify or cease engaging in moderate to vigorous activity. If your health changes, it is important you [screen](#) for contraindications again.

**ABSOLUTE CONTRAINDICATIONS TO EXERCISE [reasons not to continue]:** This includes but is not limited to an incompetent cervix, ruptured membranes, preterm labour, persistent second or third trimester bleeding, placenta previa; pre-eclampsia, evidence of intrauterine growth restriction, multiple gestation (triplets or higher number), poorly controlled type 1 diabetes, hypertension or thyroid disease and other serious cardiovascular, respiratory or systemic disorders as specified by Health Care Professional. **RECOMMENDATION:** Continue activities of daily living, but do not take part in moderate or vigorous exercise and take guidance from your Medical Practitioner.



# ARE YOU AN ATHLETE WHO IS CURRENTLY PREGNANT?



**RELATIVE CONTRAINDICATIONS TO EXERCISE [reasons to consider modification]:** This includes but is not limited to mild/moderate cardiovascular or chronic respiratory disease, pregnancy induced hypertension / gestational hypertension, poorly controlled seizure disorder, type 1 diabetes, symptomatic anaemia, malnutrition, significantly underweight or eating disorder, twin pregnancy after the 28th week, history of spontaneous miscarriage, preterm labour or foetal growth restriction or other significant medical conditions. **RECOMMENDATION:** Discuss advantages and disadvantages of exercise with your Health Care Professional and continue exercise with appropriate modification.

**DO:** Accumulate 150-300 minutes of moderate-vigorous exercise per week consisting of aerobic, resistance and pelvic floor exercises.

**DO:** Modify training as required to accommodate physiological changes as pregnancy progresses including pregnancy weight gain, the growing baby bump, increased joint laxity and change in balance.

**DO:** Ensure adequate hydration, especially when exercising in hot and/or humid conditions.

- > Core body temperature should remain between 36°C-39°C so avoid exercise, training and recovery in excessively cold, hot and/or humid conditions (including ice baths, cryotherapy, spas, saunas and heat chambers) especially during the first trimester.
- > Exercise in supine position (lying on your back) if causing light headedness or dizziness.
- > Those considering altitude training above 2000m (including chambers and tents) should seek supervision from a Health Care Professional with knowledge in this area.
- > Avoid training and competition that might involve a risk of contact, collision or falls.

## NUTRITION & WEIGHT GAIN



Work with a Sports Dietitian to help monitor and meet the nutritional needs of being an athlete and being pregnant.

- > **Extra nutrients:** The basic principles of healthy eating remain the same during pregnancy, though the recommended dietary intake is higher for some nutrients during pregnancy. You should have at least 500 micrograms of folate and 150 micrograms of iodine per day.
- > **Supplements:** Checking your supplements (pregnancy or sport-related) is your responsibility and you should ensure that these supplements do not contain prohibited substances.
- > **Iron deficiency:** Is a common issue for female athletes and pregnant women. Your Health Care Professional can check iron levels, whilst your Sports Dietitian can provide advice on strategies to meet iron needs, as well as other important nutrients such as calcium.
- > **Nausea and/or vomiting:** Can occur at any point during the day. Drink plenty of fluids, eat small portion meals/snacks often throughout the day, get rest and avoid foods and smells that trigger nausea. Try to avoid training on an empty stomach.
- > **Avoid:** Foods that may contain listeria bacteria, salmonella or high levels of mercury. Also avoid smoking, alcohol and the use of illicit drugs. Caffeine (a stimulant present in coffee, tea, energy drinks, some soft drinks and sports products) should be limited to 200mg day – approximately two cups of coffee per day.
- > **Weight Gain:** Healthy weight gain over the course of a pregnancy is important. [The Institute of Medicine \(IOM\) guidelines](#) recommend 11.5-16.0kg over the entire course of the pregnancy for women who are a healthy pre-conception weight. Do not engage in unhealthy practices that attempt to minimise weight gain via restriction in food quantity and range. Concerns around changes in weight/physique are best addressed with a Dietitian.



# ARE YOU AN ATHLETE WHO IS CURRENTLY PREGNANT?



## SLEEP

While there are no specific studies examining the sleep behaviours of elite athletes during pregnancy, we know that pregnant women, including elite athletes, usually obtain well below the recommendation of 7-9 hours of **GOOD QUALITY SLEEP** per night, and that sleep worsens as pregnancy progresses. To improve sleep:

- > **Create a good sleep routine:** Wind down 30 minutes before bedtime and turn off all electronic devices and bright lights.
- > **Avoid:** Caffeine, sleeping tablets, spicy and/or heavy meals close to bedtime and irregular sleep routines.
- > **Avoid:** Sleeping on your back (particularly after 28 weeks gestation) and consider pregnancy pillow for additional support.
- > **Napping:** Is ideal for pregnant athletes as it may help to supplement inadequate sleep. Consider napping between 20-90 minutes per day and aim to take your nap between the hours of 1-4:00pm.
- > **Allow 30 minutes upon waking:** To reduce sleep inertia (feeling sluggishness immediately on waking) before training / competing for better performance outcomes.



## BRA SUPPORT

A well-designed and fitted sports bra is essential during pregnancy to support growing and often tender breasts. You will often require more support and a larger bra size so choose a sports bra that provides 'higher support' or wear two bras simultaneously with these features:

- > **Band:** High-quality elastic fabric that does not curl up and can stretch yet retain its shape and includes several adjustment options (hook, clip, zip) to allow for ongoing change.
- > **Cups:** Completely cover your breasts (near your armpits and at the top of each breast) and comfortably compress each breast. Non-underwire sports bras with elastic material in the cups adapt more easily to changing breast shape and size. Any underwire **MUST** sit on your breastbone (at the front) and ribs (near your armpits) and **NOT** on your breast tissue. Cups should be able to accommodate pads to manage any leakage that can occur in the latter stages of your pregnancy.
- > **Straps:** Adjustable, wide and padded. If wearing two bras simultaneously, make sure each bra has a different strap orientation (e.g., vertical straps and bra and racerback) for comfort and weight distribution.
- > **Material:** Smooth, soft to touch and moisture-wicking (cool to wear), non-abrasive and no seams particularly on the inside of the cups.



## PELVIC FLOOR

- > The combined load of pregnancy and heavy lifting and/or high-impact exercise may overload the pelvic floor for some women and can lead to the development of pelvic floor symptoms either during pregnancy or after childbirth.
- > Pelvic floor exercises are recommended before, during and after pregnancy as they can help to preserve your pelvic floor health. Speak with your Sports Physiotherapist early, to find a Women's Health Physiotherapist that understands your sport demands as well as pregnancy plans.



# ARE YOU AN ATHLETE WHO IS CURRENTLY PREGNANT?



## OTHER CONSIDERATIONS

**TRAVEL:** During pregnancy, restrictions apply for most modes of commercial travel. Most domestic airlines will not permit pregnant women to travel for more than four hours after 36 weeks gestation, international flights restrict travel from 32 weeks. Always check with your Health Care Professional prior to planning travel to ensure it is safe for you to do so. When travelling, move often by flexing and extending knees and ankles and stop to stretch your legs every two hours, consider wearing knee-high fitted compression stockings and stay well hydrated to also reduce the risk of blood clots. It is also important to ensure that travel insurance covers both you and your unborn baby.

**MENTAL HEALTH:** Engaging in exercise during pregnancy also has a positive effect on mental health. However, pregnancy can also uncover or worsen pre-existing mental health issues. If you have any concerns you should discuss this with your sports doctor or health professional, or the [AIS Mental Health Referral Network](#).

Please note, this factsheet does not replace individualised medical advice.

## Contributors

Dr Melanie Hayman (CQUniversity), Dr Margie Davenport (University of Alberta, Canada), Dr Rachel Harris (AIS FPHI), Dr Clare Minahan (Griffith University), Dr Louise Burke (Australian Catholic University), Dr Jodie Dakic (Monash University), Dr Deirdre McGhee (University of Wollongong), Dr Julie Steele (University of Wollongong), Dr Michele Lastella (CQUniversity)

## References

1. Brown WJ, Hayman MJ, Haakstad L. et al. [2020] Evidence-based physical activity guidelines for pregnant women: Report for the Australian Government Department of Health. Australian Government Department of Health: Canberra. Available from: <https://www.health.gov.au/resources/publications/evidence-based-physical-activity-guidelines-for-pregnant-women>
2. Mottola M, Davenport M, Ruchat S. et al. [2018] 2019 Canadian guideline for physical activity throughout pregnancy. BJSM. Available from: <https://bjsm.bmj.com/content/52/21/1339>
3. Department of Health, Australian Government. [2020] Australian Clinical Practice Guidelines: Pregnancy Care. Available from: <https://www.health.gov.au/resources/pregnancy-care-guidelines>
4. Department of Health, Australian Government. [2013] Australian dietary guidelines: healthy eating during pregnancy. Available from: <https://www.eatforhealth.gov.au/guidelines>
5. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. [2021] Planning for Pregnancy. Available from: <https://rancog.edu.au/womens-health/patient-information-resources/planning-for-pregnancy>
6. Royal Australian College of General Practitioners [2018] Guidelines for preventative activities in general practice, 9th edition. Available from: <https://www.racgp.org.au/getattachment/1ad1a26f-9c8b-4e3c-b45b-3237272b3a04/Guidelines-for-preventive-activities-in-general-practice.aspx>
7. Australian Government. Eat for health - Healthy eating during your pregnancy [2015]. Available from: [https://www.eatforhealth.gov.au/sites/default/files/files/the\\_guidelines/n55h\\_healthy\\_eating\\_during\\_pregnancy.pdf](https://www.eatforhealth.gov.au/sites/default/files/files/the_guidelines/n55h_healthy_eating_during_pregnancy.pdf)
8. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. [2021] Why your weight matters during pregnancy. Available from: <https://rancog.edu.au/wp-content/uploads/2022/06/Why-your-weight-matters-during-pregnancy-pamphlet.pdf>
9. Lastella M et al. [2021] To Nap or not to nap? A systematic review evaluating napping behavior in athletes and the impact on various measures of athletic performance. Nature and Science of Sleep. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8238550/>
10. Ravanelli N et al. [2019] Heat stress and fetal risk. Environmental limits for exercise and passive heat stress during pregnancy: a systematic review with best evidence synthesis. BJSM. Available from: <https://bjsm.bmj.com/content/53/13/799>