

# Recreational exercise and pregnancy:



Royal College of  
Obstetricians and  
Gynaecologists

Setting standards to improve women's health



Published September 2006 by the RCOG

## Contents

## Page number

Key points	1
About this information	2
What is recreational exercise?	2
What are the benefits of recreational exercise during pregnancy?	3
Are there any risks?	3
Why aerobic and strength conditioning exercise?	5
What kind of recreational exercise should I avoid?	6
How can I be sure not to over-exert myself?	6
When should I stop exercising?	8
What kind of exercise programme should I follow?	8
Can I exercise if I have a medical condition?	9
Can I train for athletic competitions?	9
Can I exercise immediately after birth?	9
Is there anything else I should know?	10
Sources and acknowledgements	11

## Key points

- Recreational exercise refers here to any kind of energetic (aerobic) exercise (such as swimming or running) and/or strength conditioning exercise.
- During pregnancy, aerobic and strength conditioning exercise is considered to be safe and beneficial.
- The aim of recreational exercise during pregnancy is to stay fit, rather than to reach peak fitness.
- You should take extra care when doing exercises where there is a possibility of losing your balance, such as horse riding or downhill skiing.

- You should avoid contact sports where there is a risk of being hit in the abdomen, such as kickboxing, judo or squash.
- If you experience any unusual symptoms, you should not continue to exercise. You should contact your healthcare professional immediately.
- If you have a medical condition, you should discuss this with your healthcare professional before doing recreational exercise.
- Pelvic floor exercises during pregnancy and immediately after birth may reduce the risk of urinary and faecal incontinence in the future.
- For most women, it is safe to exercise as soon after the birth as they feel ready.
- Recreational exercise does not affect the amount of milk you produce or its quality.

## About this information

This information is designed to help you and your healthcare professional to discuss and develop an exercise programme during pregnancy and immediately after the birth of your baby.

This information is based on the Royal College of Obstetricians and Gynaecologists (RCOG) Statement **Exercise in Pregnancy**, published by the RCOG in January 2006 (see Sources and acknowledgement section).

This information aims to help you and your healthcare team to make the best decisions about your care. It is not meant to replace advice from a member of your healthcare team about your own situation.

Some of the recommendations here may not apply to you; this could be because of an illness you have, your general health or both of these. If you think the care you get does not match what we describe here, discuss this with your doctor, midwife, or another member of your healthcare team.

## What is recreational exercise?

Exercise forms a part of our daily lives, whether we realise it or not. Actions such as climbing stairs, walking to the shops or running for a train all involve some form of exercise. Recreational exercise refers here to any planned regular exercise that a woman takes during her pregnancy, which involves energetic (aerobic) exercise (such as swimming or running) and/or strength conditioning exercise. The aim of recreational exercise during pregnancy is for a woman to stay fit rather than to reach peak fitness.

## What are the benefits of recreational exercise during pregnancy?

### Benefits for you

Many women find that recreational exercise helps them to adjust to the physical changes that occur during pregnancy. It may help relieve tiredness, lower back pain and reduce varicose veins and swelling of the feet and ankles. Recreational exercise improves muscle tone, strength and endurance. It makes it easier to carry the weight you gain during pregnancy and helps prepare you for the physical challenge of labour.

Recreational exercise promotes a sense of wellbeing. Staying fit during pregnancy may help to reduce feelings of stress, anxiety and depression. Recreational exercise also improves sleep.

Recreational exercise during pregnancy may help to prevent medical conditions such as:

- gestational diabetes mellitus (diabetes that develops during pregnancy)
- hypertension (high blood pressure).

Recreational exercise also reduces the risk of developing colon cancer and may reduce the risk of developing breast cancer later in life.

If you have gestational diabetes mellitus (diabetes that develops during pregnancy), exercise can help to improve your blood sugar levels.

Women who do not do recreational exercise during pregnancy may become unfit.

### Benefits for your baby

Women who do strength conditioning exercise during pregnancy tend to have a shorter labour time and fewer delivery complications.

## Are there any risks?

Although recreational exercise can be beneficial during pregnancy, there may also be certain risks. These are related to the physical changes that occur as your body adapts to pregnancy. The risks are more likely to occur when you do inappropriate kinds of exercise (see section on 'What exercises should I avoid?') and when you over-exert yourself (see section on 'How can I be sure not to over-exert myself?').

By making appropriate adjustments to your exercise routine, you can reduce the likelihood of harm to you and the baby.

The risks include:

➤ **Getting too hot (hyperthermia)**

When you exercise during pregnancy, your overall body temperature increases more than it would do normally. If your body temperature rises above 39.2°C in the first 12 weeks, this may affect the baby's development leading to disability at birth.

To reduce the risk of getting too hot, you should:

- ensure that you drink lots of water before and during exercise
- avoid over-exerting yourself, particularly in the first 12 weeks of pregnancy
- avoid exercising in a very hot and humid climate until you have acclimatised - this will take a few days.

➤ **Low blood pressure (hypotension)**

When you lie flat on your back, the growing baby presses on the main blood vessels. The effect is that less blood is pumped around your body and this may lead to low blood pressure (hypotension). This is more likely after 16 weeks of pregnancy.

To reduce the risk of low blood pressure, you should:

- avoid exercises which involve lying flat on your back, particularly after 16 weeks.

➤ **Physical injury**

During pregnancy you may notice that your joints become looser. You may also notice that you can flex and extend particular parts of your body more than usual, such as your elbows, wrists, fingers, and knees. This is often referred to as hypermobility. It occurs because hormonal changes affect the ligaments that normally support your joints, which in turn make the joints loose in preparation for birth. When your joints and ligaments are less stable, you are at increased risk of injuring yourself.

To reduce the risk of physical injury, you should:

- make sure that you do warm-up and cool-down exercises
- avoid sudden changes of direction, if you are doing aerobic exercise
- consider wearing pelvic support belts during exercise.

➤ **Insufficient oxygen in the baby (hypoxia)**

At high altitudes, the flow of blood to the womb is decreased and so the baby receives less oxygen. If a woman exercises at high altitudes, the amount of blood flowing to the womb is decreased even further. This leads to insufficient oxygen for the baby.

To avoid the risk of the baby receiving insufficient oxygen, you should:

- avoid exercise at altitudes over 2500 metres until you have acclimatised - this may take a few days.

### ➤ **Blood sugar level**

Blood glucose is a source of energy for both you and the baby. It is important that you:

- eat well during pregnancy
- exercise for no more than 45 minutes at a time.

If you have pre-existing or gestational diabetes mellitus, then you should take particular care when exercising. You should have your blood glucose monitored, eat at regular times, take rest at specific times, and ensure that your baby is carefully monitored. Your healthcare professional should provide you with further information.

## **Why aerobic and strength conditioning exercise?**

The best forms of recreational exercise during pregnancy are:

- aerobic exercise, also known as cardiovascular (heart and lungs) exercise. When you do aerobic exercise your heart rate raises. This causes blood to circulate more quickly around the body and as a result more oxygen reaches the muscles. Swimming, running, fast walking, aqua aerobics and dancing are examples of aerobic exercises.
- strength conditioning exercise. This form of exercise helps to increase your overall fitness and involves slow, controlled movements such as weight bearing exercises.

If you do not exercise routinely and you are starting an aerobic exercise programme, you should be advised to begin with no more than 15 minutes continuous exercise three times per week, increasing gradually to a maximum of 30 minute sessions four times a week to daily.

If you exercised regularly before pregnancy, you should be able to engage in the same higher intensity exercise programmes, such as running and aerobics, with no adverse effects for you or the baby.

As your pregnancy progresses, you should be aiming to gradually reduce your overall activity. Your healthcare professional can give you guidance you on when and how to reduce your exercise.

## What kind of recreational exercise should I avoid?

- You should avoid exercises which involve lying flat on your back, particularly after 16 weeks.
- You should avoid contact sports where there is a risk of being hit in the abdomen, such as kickboxing, judo or squash.
- You should take particular care when doing exercises where there is a possibility of falling or losing your balance, such as horse riding, downhill skiing, ice hockey, gymnastics and cycling. Because your joints are less stable, your centre of gravity is altered (the bump tends to overbalance you), and your reactions are slower. It might be best to avoid these exercises unless you do these activities regularly and you generally take extra care. The consequences of a fall can be more severe in pregnancy.
- You should avoid scuba diving for your entire pregnancy because the baby has no protection against decompression sickness and gas embolism under water.
- You should avoid exercising over 2500 metres until you have acclimatised.

## How can I be sure not to over-exert myself?

To ensure that you do not over-exert yourself, you should always have a warm-up and a cool-down period.

There are also various techniques to help you to stay fit without exercising too intensely. These are:

### The 'talk test'

During recreational exercise, you should be able to hold a conversation. If you become breathless as you talk, then you are probably exercising too strenuously.

### Self-assessment scale

Another way to ensure that you are not over-exerting yourself is to use the 'Borg Scale of Perceived Exertion'. This scale allows you to assess for yourself how strenuously you are exercising. One advantage of this technique is that it enables you to increase or decrease the intensity of your exercise as your pregnancy progresses.

BORG'S SCALE OF PERCEIVED EXERTION	
6	
7	Very, very light
8	
9	Somewhat light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very, very hard
20	

### Borg Scale of Perceived Exertion

As can be seen, 'very, very, light exercise' is at one end of the scale (7 points) and 'very, very, hard exercise' is at the other end (19 points). During pregnancy you should be aiming to stay fit, which is around the middle of this scale, described as 'Somewhat hard' (12-14 points).

### Monitoring your heart rate

When doing aerobic exercises, you should have a target zone for your heart rate. The target zone will depend upon your age and your exercise routine (as below).

MODIFIED HEART RATE TARGET ZONES FOR AEROBIC EXERCISE IN PREGNANCY	
Maternal age	Heart rate target zone (beats/minute)
Less than 20 years	140-155
20-29 years	135-150
30-39 years	130-145
Over 40 years	125-140

If you had a sedentary lifestyle prior to pregnancy, you will probably be advised of a maximum heart rate of sixty to seventy percent above your normal rate. If you are aiming to maintain fitness during pregnancy, then the upper limit of sixty to ninety percent of maximum heart rate will be advised. You should check your heart rate regularly while exercising to ensure that you do not exceed your target zone.

To check this, you need to be able to take your pulse. This is because your pulse rate tells you how many times your heart beats. Your healthcare professional should show you how to take your pulse accurately. Information can be found at <http://www.strokeheart.org/CYPA/check.html>.

## When should I stop exercising?

If you have any unusual symptoms, you should not continue to exercise.

If your symptoms began during aerobic exercise, it is important that you do not bring your exercises to an end abruptly as this can make you feel very faint. Instead, you should either walk around slowly for a short while, or continue transferring your weight from one foot to the other by lifting one heel and then the other.

You should contact your healthcare professional immediately afterwards.

Unusual symptoms may include any of the following:

- dizziness or feeling faint
- headache
- shortness of breath before exertion
- difficulty getting your breath whilst exercising
- pain or palpitations in your chest
- pain in your abdomen, back or pubic area
- pain in your pelvic girdle
- weakness in your muscles
- pain or swelling in your leg/legs
- painful uterine contractions or preterm labour
- fewer movements from baby
- leakage of your 'waters' (amniotic fluid)
- bleeding.

## What kind of exercise programme should I follow?

Your programme should be designed to keep you fit, rather than improve your physical fitness or prepare you for a competition. For some women, this will mean adjusting to a less intense routine. For other women, it might mean introducing exercise to their lifestyle.

The development of an exercise programme should take into account:

- Your fitness level including the kind of exercise you do, how much and how often you exercise and what you want to achieve.
- Based on how fit you are, your exercise routine will be classified as sedentary, recreational or competitive athlete.

- A health professional with a specialist training in teaching exercise during and after pregnancy will weigh up the potential benefits and harms of a range of exercises. Depending upon your current exercise routine, a programme should be recommended for you during pregnancy. This will include:
  - ◆ appropriate types of exercise
  - ◆ the length of each exercise session
  - ◆ the number of exercise sessions each week
  - ◆ how intensely you should exercise.

## Can I exercise if I have a medical condition?

If you have a medical condition such as heart disease or high blood pressure, or develop this during pregnancy, then you should talk with your healthcare professionals (such as cardiologist and obstetrician) **before** doing any recreational exercise.

## Can I train for athletic competitions?

If you are an athlete, you can continue to train for competitions. However, you will need supervision during training. You will need to be supervised by an obstetrician who has specialist knowledge and expertise. You will need to talk with your trainer about your requirements for additional hydration and nutrition.

If you are an elite athlete, you should not expect to retain peak fitness, so you should be prepared for a reduction in your performance during pregnancy.

## Can I exercise immediately after birth?

If you have had an uncomplicated pregnancy and delivery, then you should be able to do mild recreational exercise such as walking and stretching immediately after birth. You should be advised to do pelvic floor exercises after the birth, as this reduces the risk of urinary and faecal incontinence.

Recreational exercise does not affect the amount of milk you produce or its quality. The baby's growth will not be affected.

Women who do recreational exercise during pregnancy, tend to continue to exercise after birth. The benefits of exercising at this time are that you:

- feel better
- feel less anxious and depressed
- have more energy
- lose weight
- feel fitter (improved cardiovascular fitness).

You should return to the exercise routine you maintained before pregnancy only when you feel ready to do so. You should not try any high impact activity (where both feet leave the ground at the same time such as jumping or jogging) too soon.

During pregnancy abdominal muscles are stretched and pulled to the side. You should follow advice of your midwife about when and how to exercise in the first few days and weeks after birth.

If you had complications during pregnancy, then you should discuss what exercise is safe to do after birth with a healthcare professional.

## Is there anything else I should know?

- Many women ask about strength conditioning, weight training and stretching exercises such as yoga and pilates. Research has not yet confirmed how safe it is to do these during pregnancy. For further information ask your healthcare professional.
- You may have read that exercise has an effect on birth weight and length of gestation. There is currently insufficient evidence to confirm this.
- If you are exercising in water, as in aqua-natal classes, or you are using a hydrotherapy pool, the water temperature should not exceed 32°C in a swimming pool and 35°C in a hydrotherapy pool.
- Swimming can make it more difficult for you to notice your body heating up because the water makes you feel cooler.