



Healthcare providers

*Physical activity during
pregnancy*

Training Manual

Version 1.0: January 2021

Theory

Practical Application

Self-Study

Background to the training	3
Introduction.....	3
Module 1: Understanding the physiological changes during pregnancy	4
Outcomes.....	4
Overview	4
Hormonal changes	4
Heart and blood flow changes.....	5
Breathing changes	6
Metabolic (how the body uses energy) changes.....	7
Physical changes	8
Other common pregnancy issues.....	10
Signs and symptoms for concern.....	10
Module 2: Healthy weight gain	14
Module 3: Prescribing physical activity during pregnancy	17
Being physically active	17
Benefits of physical activity during pregnancy	17
Risks of being physically activity during pregnancy	18
When is it not okay to exercise during pregnancy	19
Prescribing exercise during pregnancy	19
Module 4: Postpartum wellness	25
Outcomes.....	25
Health and recovery after birth	25
Postpartum period.....	25
Rest.....	27
Breastfeeding.....	27
Stay well nourished	27
Physical activity after having a baby	27
Checkpoints.....	32
Module 5: Facilitating Healthy Conversations for Behaviour Change	34
Outcomes.....	34
Factors that Influence our Decisions for Lifestyle Change	34
Readiness for Change	37
Brief Behavioural Counselling: The 5 A's and "Reflective Listening"	39
Guiding Style or "Change Talk"	39
Setting SMART Goals	41
Module 6: Pre-Exercise Screening & Wellness assessments	48
Outcomes.....	48
Pre-Exercise Screening.....	48
References	55

Background to the training

Introduction

Welcome to the **Baby Steps** physical activity during pregnancy training! As a healthcare provider we have put together this training to help support and empower you to recommend, prescribe, counsel and support pregnant women to become more physically active. There are many healthy lifestyle choices that pregnant women need to make for a healthy pregnancy, and being physically active is an important part of that. This manual is aimed at providing you with information to improve your knowledge and confidence for prescribing physical activity during this important time in a woman's life.

Pregnancy is a unique time for a woman – their body undergoes significant physical changes, all which can affect their health and wellbeing. Added to that is the emotional changes and anticipation of having a baby and giving birth.

However, it is important to realise that pregnant women are not sick, pregnancy is not an illness! They should be encouraged to make healthy choices around sleeping, eating, being active, gaining weight and looking after themselves and their baby. Your role is to guide them through this journey by providing information, having healthy conversations and setting goals.

This guide is aimed at providing you with an understanding of the physiological changes that occur during pregnancy and how this affects the lifestyle choices that pregnant women need to make. It will also provide you with knowledge and understanding on WHY women are given the advice provided in this guide.

Pregnancy is one of the greatest miracles, but it can also be a difficult and challenging time for women if they are

not physically and emotionally prepared. This guide and your role are to help equip women to make healthy and safe choices for themselves and their baby – this will have a big impact not only on the woman's health but the health of the future generation!

With the availability of the internet, combined with cultural myths and old-wives' tales we hear, women are often bombarded with information on what to do or not to do during pregnancy, and it is often hard for them to know which are the correct, and safe choices to make. After this training, you will be able to guide them on a safe and healthy path during their pregnancy.

Pregnancy usually lasts 38 weeks from conception or 40 weeks from the last menstrual period. Pregnancy is divided up into three stages or trimesters. This helps healthcare providers to monitor the development of the baby and helps women to know what to expect. The **first trimester** is measured from 1 to 12 weeks. The **second trimester** is from 13 – 26 weeks. The **third trimester** is from week 27 up until the birth of the baby.

This guide is aimed at helping pregnant women understand what to **expect**, what to **know** and what to **do**, to ensure that it is an enjoyable experience.

Introductory activity: In small groups, discuss your role as health care providers in providing PA counselling and identifying issues that may prevent you from doing this and possible strategies / solutions to overcome this. Think about people that could support you in this task, as well as things you could do in your environment to help you

Module 1: Understanding the physiological changes during pregnancy

Facilitator's Note: Allow time for discussion of the examples and activities.

Outcomes

This module will assist you to:

- Understand the physiological changes that occur during pregnancy
- Understand the common effects of these changes
- Understand how these changes may affect the physical activity levels of women and find solutions to these challenges

Overview

A pregnant woman's body makes significant adaptations to accommodate for the growing baby. Women often start feeling changes within a few weeks of conceiving. They are often more aware of their body and the changes that they are undergoing. Your role is to understand what the normal changes and symptoms that women should experience are, and also when to refer them to their healthcare provider.

Hormonal changes

The main hormones involved in pregnancy are estrogen and progesterone. These are responsible for much of the growth and development of the baby, as well as milk production and getting the breasts ready for breastfeeding. These changes often lead to the moods and emotional changes felt by women during pregnancy.

Pregnancy change	What happens?	What for?	When?	Common discomfort/symptom
Hormonal changes	Increase in estrogen and progesterone	Helps support growth and development of the baby Helps improve blood flow to the baby Helps transfer of nutrients Milk development Growth of the uterus	Starts at the beginning of pregnancy and peaks in 3 rd trimester	Morning sickness Hormones can slow the digestive system causing heartburn, constipation, hemorrhoids Affects emotions causing moodiness, anxiety, depression, insomnia Increased appetite which can sometimes lead to excess weight gain
	Increase in relaxin	Softens ligaments and cartilage in the pubic bone but also other joints to allow it to stretch during delivery	Peaks in 3 rd trimester and can continue with up to 3 months postpartum	Risk of joint injury and overstretching

Activity Box: How would hormonal changes affect a woman's physical activity levels?

What solutions could you recommend for these challenges?

Heart and blood flow changes

In the first few weeks of pregnancy the circulation system (blood flow) undergoes significant changes. The blood vessel walls relax which means that there is a reduced amount of blood that goes back to the heart and pumped back out again, leading to low blood pressure, dizziness, faintness and light-headedness.

However, the blood vessel walls need to be more relaxed in order to accommodate for the increase in blood volume – up to 60% more blood will circulate around the body during pregnancy. This increased blood flow is usually directed to the uterus and placenta. It causes the heart rate to increase (up to 15 beats per minute faster at rest). It will also increase the women's iron and folic acid requirements, and often supplements are given during pregnancy for these elements.

Pregnancy change	What happens?	What for?	When?	Common discomfort/symptom
Blood and heart changes	Heart pumps out up to 40% more blood Amount of blood increases by 30-60% Increase in heart rate by 18-20% The heart is working 30-50% harder	The growing baby, uterus and placenta all increase the body's demand	From the first few weeks of conception and peaks in 3 rd trimester	Sluggish circulation leads to swelling in hands and feet Varicose veins Heart palpitations Low blood pressure Leg cramps Headaches Fatigue Dizziness

Activity Box: How would blood flow changes affect a woman's physical activity levels?

What solutions could you recommend for these challenges?

How would these blood flow changes affect how we measure or monitor physical activity intensity during pregnancy?

What solutions would you recommend?

Breathing changes

The respiratory (lungs) system has to also adapt to the increase in blood flow and requirements of the growing baby. Hormones cause the woman to be more sensitive to carbon dioxide and therefore she starts to overbreathe, which often makes her feel short of breath. The body also uses 10-30% more oxygen during pregnancy. As the baby grows bigger, the growing uterus will also put pressure on the diaphragm making her feel out of breath and causing discomfort in the rib cage area.

Pregnancy change	What happens?	What for?	When?	Common discomfort/symptom
Respiratory changes	<p>Increase in oxygen consumption by 10-30%</p> <p>Breathing rate increases</p> <p>The amount of air moving in and out of the lungs increases by 40-50%</p>	The placenta and growing baby increase the demand for oxygen in the body	Starts in 1 st trimester and gradually increases throughout pregnancy	<p>Shortness of breath</p> <p>Ribcage discomfort</p> <p>Lightheadedness</p>

Activity Box: How would these breathing changes affect a woman's physical activity levels?

What solutions could you recommend for these challenges?

Metabolic (how the body uses energy) changes

Supporting a growing baby takes lots of energy, and so it is no wonder that a woman's metabolic rate increases by 15-20% during pregnancy. This means that a pregnant woman's energy requirements will change, and explains the need to increase their calorie consumption. In the second and third trimester, around 300 extra calories per day are needed.

If you are burning more energy, this means that there is an increase in heat production too. Heat stress is therefore a factor to consider during pregnancy, and is associated with birth defects, especially in the first trimester. That is why women are advised to avoid hot tubs and saunas during pregnancy. Another factor that can help to reduce core temperature and avoid heat stress is hydration. Therefore, women are advised to drink lots of clean water during pregnancy, around 8-12 glasses a day.

The way a woman uses the different energy sources also differs in pregnancy. Carbohydrates are directed to the growing foetus while fat becomes the mom's main source of energy. This is one reason why, if we eat too much fat, or if we don't use it (in exercise), it is much easier for a pregnant mom to put on excess weight. Sending the carbohydrates to the baby can often lead to fluctuating glucose levels, leading to feelings of fatigue, nausea and dizziness. Therefore, it is important that women make healthy food choices and eat regular small meals throughout the day. The redirecting of carbohydrates to the baby is often caused by an insulin resistance response. Insulin plays an important role in the development of diabetes, and this makes women prone to gestational diabetes mellitus (diabetes only found in pregnancy).

Pregnancy change	What happens?	What for?	When?	Common discomfort/symptom
Metabolic changes	Metabolic rate (the rate we burn energy) increases by 15-20% Carbohydrates get given to the growing baby and fat is the energy source for the mom	Support growth and development of the baby	Increases in the 2 nd and 3 rd trimester	Low blood sugar levels Dizziness Fatigue Light-headed Nausea Hunger

Activity Box: How would these metabolic changes affect a woman's physical activity levels?

What solutions could you recommend for these challenges?

Physical changes

The most obvious physical change during pregnancy is of course the growing belly, or "baby bump". As the uterus shifts and protrudes forward, the body will compensate by lengthening some muscles and shortening of others in order to keep her upright. This posture change will often be seen as a hollowing, or increases curve, of the lower back (lordosis) and rounding of the shoulders (kyphosis). Enlarged breasts will also

contribute to the shoulders rounding. This, combined with the hormonal affects and increased weight on the joints, can lead to lower back pain and pubic pain.

It will also affect the woman's centre of gravity which will in turn affect their balance. This may put them at greater risk of falling.

Remember we also mentioned that the hormone relaxin causes laxity of the joints and the ligaments to stretch? Well, this, combined with carrying a heavier stomach, and increase the pressure on the joints, especially the hips, knees and ankles and can lead to stress and strain.

Pregnancy change	What happens?	What for?	When?	Common discomfort/symptom
Physical changes	Increased size of the stomach Enlargement of the breasts	Due to growing baby and milk production	Usually from the 2 nd and 3 rd trimester onwards. Each woman is different in when she starts to "show"	Lower back pain Pubic pain Shoulder and neck pain Loss of balance

Activity Box: How would physical changes affect a woman's physical activity levels?

What solutions could you recommend for these challenges?

What physical changes would you look out for that would signal a possible referral to a Physiotherapist /Exercise Specialist?

Other common pregnancy issues

There are other common issues that are caused or exacerbated by pregnancy, and some are listed here. If any of these are affecting the woman's quality of life, or their ability to do activities of daily living, they should see a health care provider such as a physiotherapist, midwife or doctor.

Hair and nail changes: Many women experience hair loss or strange hair growth during pregnancy. Nails can also grow quicker but may become brittle. Healthy nutrition can help to minimise these symptoms.

Skin changes: Many women experiencing skin changes and new dark patches of skin, especially on the face. These can be worse with sun exposure and reduced by wearing sunscreen when going outdoors.

Rashes and boils are also common but these should be examined by a medical doctor if they persist.

As the body changes to accommodate the growing baby, stretch marks in the stomach and breasts are also common.

Diastasis recti: This is a separation of the abdominal muscles where they join in the middle of the stomach. This is caused by the growing baby stretching these muscles. It is usually not painful, and may not bother the mother, but be aware that the stomach muscles play an important role in keeping the lower back stable. Women with diastasis recti should take extra care of their lower back.

Sacroiliac joint pain: These are the joints between your lower back and your hip. Usually this joint doesn't move very much, but rather keeps your back stable when you walk or do other activities. However, with the hormonal joint laxity that occurs during pregnancy this joint can start to move, and that movement with activities causes friction in the joint and pain. Women typically start experiencing pain around the 6th month of pregnancy. Common symptoms include pain with rolling over in bed, getting in and out of a car, or climbing stairs.

Pubic symphysis pain: As with the sacroiliac joint pain, the pubic symphysis in front is not designed to move, and pregnancy laxity can cause pain and irritation. Women will complain of tenderness, clicking sensation and pain.

Carpal tunnel syndrome: There is a nerve that runs through the wrist and into the palm of our hand, and this nerve can sometimes become blocked during pregnancy, especially if there is swelling in the wrists. Women with carpal tunnel syndrome commonly complain of pain, pins and needles, numbness and sometimes blotchy skin in the area. This occurs in around 1/3 of pregnancies and usually gets better on its own once the baby arrives.

Signs and symptoms for concern

The first section of this module is aimed at making you aware of the changes that the body undergoes during pregnancy, and the expected, normal symptoms and complaints that occur. You are not expected to treat, or provide medical advice on any symptoms or pain, but it is part of your role to be aware of when to **REFER** to a health care provider such as a midwife or doctor. It is better to be **SAFE** than sorry, so if a pregnant woman complains of an issue and you are not sure if it is normal or not, rather just refer. **If you are in any doubt, just refer.**

There may be subtle signs or no signs that the baby is having difficulty, but more often than not the body sends signals that means the baby or mother are in distress.

If the pregnant woman is experiencing any of these symptoms, she needs to visit her clinic or see her healthcare provider IMMEDIATELY:

- **Bleeding** Although some light bleeding and spotting is common during pregnancy, if there is heavy, bright red bleeding, and if any bleeding is accompanied by stomach pain or cramping, they should seek medical attention immediately.
- **Stomach cramps** An occasional cramp or pain is fine if it doesn't last long or goes away with rest. Sudden or severe cramping and pain, especially when combined with bleeding, should be checked out immediately.
- **Vaginal discharge** Some mild discharge is okay, but if it increases, changes in colour or smell, it can be sign of an infection.
- **Painful urination** Its common to go to the loo more frequently than usual during pregnancy but it should not be painful and should not burn as this is a possible sign of an infection
- **Fever** A persistent fever, with body aches and joint pain, can also be signs of an infection
- **Nausea and vomiting** Nausea and vomiting is completely normal during pregnancy, but if this leads to dehydration, or if she is unable to keep fluids down for a day, she will need to see a doctor.
- **Headaches** Tension headaches are also common during pregnancy but if she complains of a severe or unusual headache, especially if this is coupled with blurred vision, she will need to go to the clinic.
- **Calf pain** Cramps and swelling in the lower leg and ankles are normal during pregnancy, but if the pain is severe, and does not go away with movement or stretching it may be a sign of a blood clot.
- **Blood pressure** Low blood pressure is normal during pregnancy but elevated blood pressure may be a sign of gestational hypertension (high blood pressure during pregnancy), or preeclampsia (a serious medical condition that can lead to death of the baby or the mother if not treated)
- **Baby movements** From about 25 weeks, pregnant women are advised to "count" their baby's movements. If the baby doesn't move regularly, this could be a sign that it's struggling.

Counting baby movements

Baby movements are one of the best signs of the baby's well-being. Expectant moms are encouraged to count their baby's movements.

- The best time to do it is after they have eaten, as the baby usually responds to an increase in blood sugar levels.
- Tell them to lie on their left side and see how long it takes for the baby to move 10 times.
- If the baby doesn't move immediately, don't worry, they are probably sleeping.
- Wait for an hour, and see if they have moved 10 times in the hour.
- If not, monitor the movements for another hour.
- If they don't feel at least 10 movements in 2 hours, they should go to their clinic to be monitored and check that the baby is okay.

Useful questions to ask

Have you felt your baby move yet?

When last did you feel him/her move?

What time of day do you feel him/her move the most?

How often do you feel the movement?

Notes

Module 2: Healthy weight gain

Facilitator's Note: Allow time for discussion of the examples and activities.

Outcomes

This module will assist you to:

- Provide general advice and information on what is considered healthy weight gain during pregnancy
- Understand the risks of gaining too much weight during pregnancy
- Provide practical tips and strategies to help women gain the right amount of weight during their pregnancy

It is expected that with the growing weight of the baby, the uterus and placenta, that pregnant women will put on weight, especially in the 2nd and 3rd trimester. In fact, not putting on weight or enough weight may put her at risk of having the baby early. On the other hand, putting on too much weight (called **excessive gestational weight gain**) can carry risks for both the mother and the baby. These risks include:

- Blood pressure complications and preeclampsia
- Gestational diabetes
- Giving birth to a macrosomic baby
- Needing a caesarean section
- Difficulty losing the weight after pregnancy, which leads to future health problems such as obesity

The amount of healthy weight gained will depend on the mother's BMI before she fell pregnant or in the early weeks of pregnancy (<10 weeks).

Help her work out her pre-pregnancy BMI

Measure her height if she doesn't know what it is. Ask her if she remembers her weight before she fell pregnant or early on in her pregnancy (<10 weeks).

Take the weight (kg) and divide by the height (m) squared

$$\frac{\text{Weight (kg)}}{\text{Height (m)}^2}$$

The guide below will help to guide how much weight she should gain for a healthy pregnancy, based on her BMI.

Pre-pregnancy or early pregnancy BMI (kg/m ²)	Total weight range
Underweight (<18.5 kg/m ²)	12.5-18kg
Healthy weight (18.5-24.9 kg/m ²)	11.5-16kg
Overweight (25-29.9 kg/m ²)	7-11.5kg
Obese (>30 kg/m ²)	5-9kg

If she is pregnant with twins, then the guideline below shows how much weight she should gain:

Pre-pregnancy or early pregnancy BMI (kg/m ²)	Total weight range
Healthy weight (18.5-24.9 kg/m ²)	17-25kg
Overweight (25-29.9 kg/m ²)	14-23kg
Obese (>30 kg/m ²)	11-19kg

Most of this body weight is gained in the second and third trimester. Very little weight is put on in the first trimester and some women may even lose weight if they have very bad morning sickness.

If she was overweight before falling pregnant, don't worry, now is the perfect time to ensure that she gains the right amount of weight that is healthy for her and her baby. Some women also become obsessed with not putting on too much weight during pregnancy. These women will need to be advised that healthy weight is normal and good, and that pregnancy is not the time to be going on a diet.

Some tips for healthy weight gain

- **Don't be tempted to "eat for two"**, especially in the first 12 weeks when she should be eating the same as before the pregnancy
- In the 2nd and 3rd trimester, **increase food intake by 200-300 calories** per day. Make sure that this comes from healthy food choices such as fresh fruit and vegetables and whole-wheat grains.
- Avoid sugary drinks and **drink water** instead
- **Choose wholegrain** pasta, rice, bread rather than white bread / pasta / rice.
- Eat a healthy **breakfast** every day
- Many women feel the need to snack regularly in order to ward off nausea. Make sure these **snacks are healthy** and low in sugar / salt
- Aim for 5 serving of **fruit or vegetables** in a day
- Limit the amount of takeaways, and rather **cook meals at home**
- Be physically **active**

Notes

Module 3: Prescribing physical activity during pregnancy

Being physically active

Being physically active is **SAFE** and encouraged during pregnancy, for many reasons. As long as there are no pregnancy complications or previous health issues, pregnant women are recommended to do **150 minutes of moderate physical activity** each week.

Women that have been previously active before falling pregnant are encouraged to maintain their physical activity levels, perhaps with some modifications in the type and intensity of the activity. Women who were sedentary (not physically active) before falling pregnant are encouraged to start slowly and progress gradually in order to reach the recommended guidelines.

In order to begin to encourage women to maintain or increase their physical activity levels, it's important to understand and discuss the benefits of being active, as well as when it is not appropriate and then also be able to talk through and support women that are having trouble becoming active. Providing clear, structured exercise advice and prescription can greatly help women to improve their activity levels.

Benefits of physical activity during pregnancy

Although many women feel tired or uncomfortable during pregnancy, it is not the time to sit back and relax! Here are some reasons why women should be active during their pregnancy

BENEFITS FOR THE MOTHER

- Improves the **strength and capacity** of the heart, lungs and muscles – meaning that women are better able to cope with the physical demands of pregnancy
- Increases **endurance levels** – women are able to take on activities for longer periods of time without getting as tired.
- **Strong muscles** also reduce lower back pain and pelvic floor problems
- **Strong muscles** to support the weight of the baby
- Provides more **energy** to do daily activities
- Improves **wellbeing** by reducing many of the common pregnancy complaints such as nausea, fatigue, leg cramps, constipation and swelling
- Exercise releases hormones called endorphins which make you feel happy. Being active improves **mood** and helps reduce stress and anxiety.
- Reduces the risk of **excess weight gain**
- Reduces the **risk of gestational diabetes** and high blood pressure
- Being strong and fit will help to prepare the mother for **labour and delivery**
- Increases strength and ability to endure the **stress of labour**
- Helps to live a longer, healthier life
- Reduces the **risk of incontinence** (being able to control your bladder)

BENEFITS FOR THE BABY

- It improves **circulation** which means the baby gets more nutrients through this improved blood flow to the placenta.
- This improved circulation is probably one of the reasons babies born to active women appear to be **protected against low birth weight**, high birth weight (macrosomia), and intrauterine growth restriction (when the baby is not growing well inside).
- **Lifelong habits** such as being active are carried over in families and help children to develop healthy habits as they grow up.

Risks of being physically activity during pregnancy

We have looked at the various benefits of being active during pregnancy and it is important to also address the risks of physical activity for the mom and the baby. Although the benefits far outweigh the risks, there are certain types of exercise or activities that we recommend pregnant women to avoid in order to minimise the risks. Always weigh up the possible risks with the benefits when recommending an activity, and stick to the activities that provide the biggest reward (benefit) with the lowest risk. Below are some activities that should be avoided or recommended with care, and the reason why there is a risk to participating in these activities.

CONTACT SPORTS OR SPORTS WITH HIGH RISK OF IMPACT

Although the risk of injury or trauma to the baby is rare, it is advisable to avoid contact sports in order to minimize this risk

For example: sports such as hockey, soccer, cycling on the road or mountain biking, horse riding

EXERCISE THAT CAUSES THE BODY TO OVERHEAT

If the mother's core temperature rises too high, it can cause birth defects. That is why women are advised to exercise at a moderate, not a high intensity and avoid activities that cause over-heating. Women are also advised to drink lots of water and keep hydrated while exercising.

For example: bikram yoga, sauna and hot tubs

LYING ON THEIR BACK OR STANDING FOR LONG PERIODS OF TIME

Low blood pressure (hypotension) is very common during pregnancy but can be made worse by lying on the back or standing motionless for too long. Signs of hypotension include dizziness, feeling faint or light headed. Women are advised to avoid exercises on their back

OVERSTRETCHING and HIGH IMPACT EXERCISES

especially in the 2nd and 3rd trimester when the weight of the baby can block the flow of blood to the mom and baby causing the blood pressure to drop.

Due to the hormone *relaxin*, a pregnant woman's joints become more flexible as they prepare for labour. Therefore, it is important to avoid overstretching as this could lead to tearing of the ligaments (that support the joint). Women are also advised to avoid high impact exercises during pregnancy as the stability of the joints are compromised due to their increased flexibility.

For example: avoid some yoga poses that require too much stretching, avoid exercises that involve excessive jumping



When is it not okay to exercise during pregnancy

If the pregnant mother already has certain health conditions, or develops certain health issues during pregnancy, it may become unsafe for her to exercise. Some examples of these include:

- Previously diagnosed heart or lung disease
- High blood pressure during pregnancy
- Cervical problems
- Persistent bleeding during pregnancy
- Placenta problems
- History of miscarriage, stillbirth or preterm labour
- Premature rupture of membranes
- Severe anaemia
- If she is carrying twins or has gestational diabetes, she will have to exercise under the guidance of an exercise professional.

Prescribing exercise during pregnancy

Most pregnant women will benefit from being physically active during pregnancy. In fact, for most women, it is more of a risk to be sedentary than it is to be active. But as discussed in the section above, there are also some women which may have complications which prevent them from doing exercise. Or some women have special considerations that would mean they need to be seen by a trained exercise specialist (such as a Biokineticist or Physiotherapist).

Therefore, **STEP ONE** before advising or prescribing physical activity, would be to do a **PREGNANCY PRE-SCREENING QUESTIONNAIRE** to see if exercise would be beneficial for her. This can be done using the form (called a PAR-Q – SEE MODULE 6) below.

Then once you have established that it is safe for her to exercise, **STEP TWO** would be to provide structured advice to help her begin this process. If she hasn't exercised before, or has stopped being active once she fell pregnant, it can be very difficult to start an exercise routine. Providing vague information will not help her to start to become active. Therefore, we aim to use the **FITT principle** for prescribing exercise that is structured and easy to follow.

What is the FITT principle?

FITT is an acronym for **F**requency **I**ntensity **T**ime and **T**ype and is the basis for advising and prescribing exercise in a structured, strategic way. Once you have covered each of these aspects, your pregnant mother should have a clear exercise routine to follow!

F

Frequency

Start with doing physical activity 3 times per week. If this is well tolerated, increase to most days of the week

EXAMPLE: Start doing some form of physical activity (walking, dancing) on a Monday, Wednesday and Friday.

I

Intensity

Aim to exercise at a *moderate* pace. This means that you should exercise at an intensity where you feel your heart rate and sweating increase but you are still able to carry out a conversation.

There are a few ways that you can measure intensity during pregnancy

- 1) Using a RPE scale (rate of perceived exertion). This is simply asking the mother how tired she feels when exercising on a scale of 20 (as shown below). **AVOID** exercising above 12 on this scale:

6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

T

Time

In order to gain the benefits mentioned above, you need to exercise at intervals of at least 10 minutes. Start with 10-15 minutes, even if it means reducing the intensity. The aim is to build up to 150 minutes of physical activity per week. **AVOID** long bouts of exercise /activity (usually longer than 60 minutes, that will lead to fatigue and exhaustion.

EXAMPLE: *Walk for 10 minutes in the morning and another 10 minutes in the afternoon.*

T

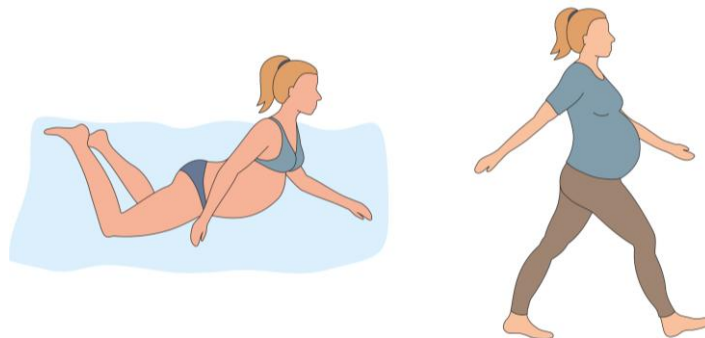
Type

Exercise can be made up of a few different components such as aerobic activity, strengthening and stretching.

Aerobic: This is physical activity that uses many, large muscles and gets the heart beating faster. Walking is the easiest and safest exercise for a pregnant woman. Most pregnant women also find this enjoyable, especially when they walk with friends or other pregnant women. Other examples of safe exercises include dancing, swimming (as long as the pool is clean), cycling in the gym, low-impact aerobics classes and modified yoga / Pilates.

REMEMBER: The hormone relaxin makes the joints lax and unstable and her growing belly will also affect her balance.

AVOID activities that are high impact on the joints or challenging for balance. We want to avoid trauma, injury or falls during pregnancy. Rather avoid activities such as high impact aerobics classes, cycling on the road / trail, jumping, contact sports such as hockey.



Strengthening: These are exercises aimed at strengthening specific muscle groups, and can be done using a small weight, resistance band or your own body weight. Examples include wall slides, calf raises, arm curls, lunges and arm- leg lifts.

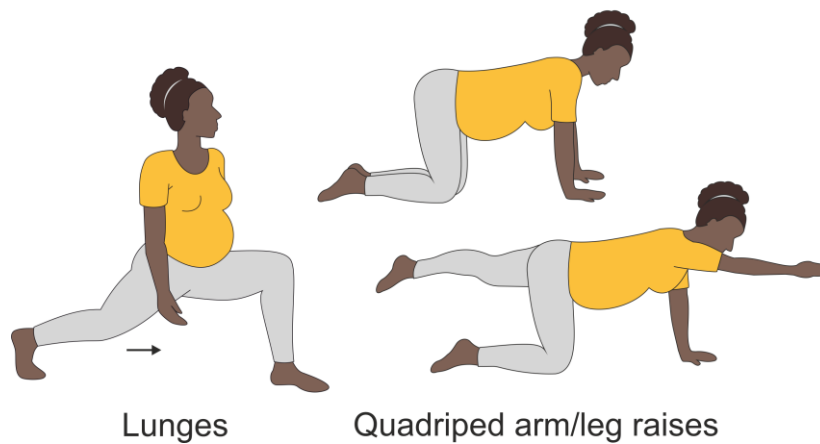
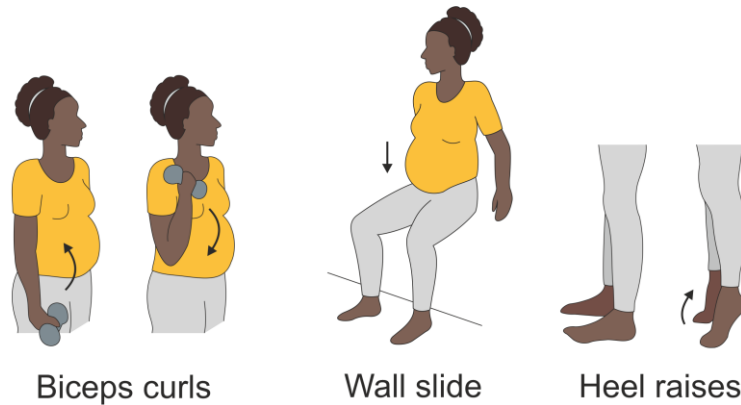
REMEMBER: Her blood vessels are relaxed to allow more blood flow to the baby. This can cause low blood pressure and make her feel dizzy or faint.

AVOID exercising that involve standing for a long time or raising arms above the head for too long

REMEMBER: Her growing belly can block the blood flow to her and her baby when lying on her back

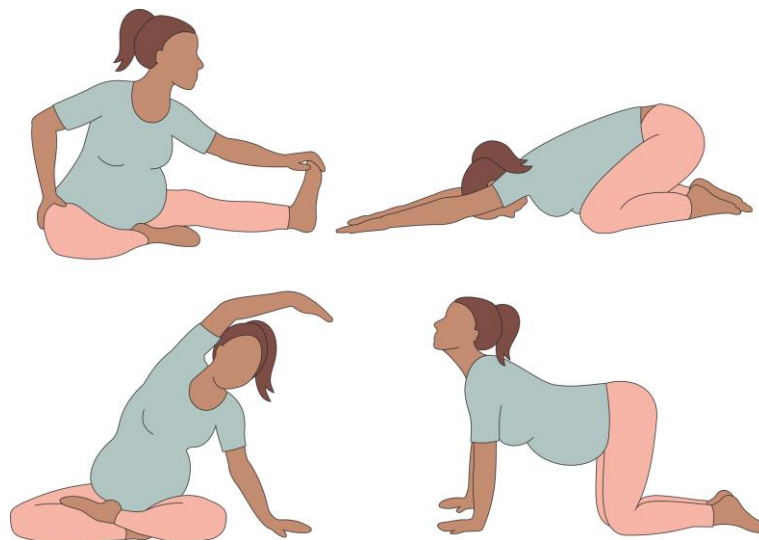
AVOID exercising on the back for more than one minute in the 1st trimester, and avoid lying on the back altogether in the 2nd and 3rd trimester.

Stretching: Stretching exercises are aimed at lengthening muscles that are short and tight. In order to stretch effectively, you have to hold the stretch for at least 15-30 seconds and do this 3 times each. Do not bounce in the stretch.



REMEMBER: The hormone relaxin makes the joints and ligaments lax and stretchy.

AVOID overstretching due to laxity in the joints and ligaments



EXAMPLE: Walk with friends twice a week for 20 minutes, put on your favorite music and dance in your lounge for 10 minutes. Whatever you choose to do, it is important that you ENJOY it!

A very important exercise - Kegel exercises

Kegel exercises are designed to strengthen the pelvic floor muscles. Strong pelvic floor muscles help to prevent urine leakage during and after pregnancy. They are also really important during delivery, and strengthening these muscles helps to restore their tone after giving birth.

Instructions for doing Kegel exercises

Take a deep breath, when breathing out squeeze the muscles of your vagina (the ones you use to go stop yourself going to the loo) up towards your belly button and hold for a couple of seconds. Breathe in and relax. Repeat this 20 times, twice a day

Kegel exercises are incredibly important to do both during and after pregnancy, and women need to be encouraged and reminded to do them as often as possible.

Notes

Module 4: Postpartum wellness

Facilitator's note: Allow time for discussion and activities

Outcomes

This module will assist you to:

- Know the expected recovery from birth and delivery
- Understand and advise on healthy nutrition, physical activity and other lifestyle choices to improve recovery outcomes

Health and recovery after birth

Having a baby is a new and exciting experience, but also requires a lot of adjustment from the mother and the family unit. These changes come with challenges, demands and experiences and this guide is designed to help the new mother or parents to deal with this transition in the healthiest way possible. From the time the mother gives birth up until 6 weeks after delivery is known as the **postpartum period**. Although the new responsibilities of motherhood can be overwhelming, it is also essential that the mother takes care of herself too.

Postpartum period

The first few weeks after delivery is crucial for both emotional and physical rest and recovery. How much recovery is needed will depend on the type of birth – whether she had a vaginal or caesarean section delivery. If she had any complications during delivery will also affect the speed and ease of her recovery.

Even if the birth process was smooth, the body undergoes dramatic changes to ensure that the body goes back to functioning how it was before pregnancy.

Physiological changes in the postpartum period

There are many physiological changes that occur in the postpartum period, most of which are aimed at getting the body back to pre-pregnancy state. It is also worth noting that in most women, their bodies may never return to exactly how they were before, and they should be encouraged that this is okay, and all part of motherhood.

Hormonal changes help to contract the uterus back to its original size. This usually happens in the first few days after delivery, and is often the reason for frequent stomach cramps during this period. The mother's blood volume also gradually returns to normal after birth.

Breast changes are as a response to the hormone progesterone which enlarges the breasts during pregnancy. Once the baby is born, hormones now control lactation (or milk production). Breastfeeding also stimulates the production of oxytocin which causes uterus contractions and prevents bleeding. This is why women tend to feel stomach cramping more frequently when feeding or just after feeding. Hearing her baby cry also causes the same hormonal response.

Immune response is usually suppressed to some degree during pregnancy so that the mother's body doesn't reject the foetus. Therefore, once the baby is born and before

this inflammatory immune response returns to normal, the new mother may be more susceptible to infections.

Type of delivery

The type of delivery will have the most effect on the speed of recovery after birth. If the mother had a **vaginal birth**, she may have also had an episiotomy. An **episiotomy** is when they cut the perineum or vaginal wall in order to enlarge the opening for the baby to come out through. Although this is not a routine procedure, it is quite commonly used. This can cause pain and may take several weeks to heal.

During a **caesarean section** (C-section), surgery is performed to cut through the abdominal muscles and the uterus in order to deliver the baby. This is often used for medical reasons when the baby or mother are at risk during vaginal delivery. These days, many women who can afford private medical care can also choose whether to have a c-section or not.

As with any surgery, these muscles can take 6-8 weeks to heal. Extra care is needed after a c-section to ensure the mother makes a full recovery. She will have been advised by her healthcare provider to avoid activities such as driving, walking upstairs and lifting heavy objects until she has healed sufficiently. She can also use vitamin E creams to assist with healing of the scar tissue.

Expected postpartum symptoms

Recovery after delivery takes time, and there are many common symptoms and discomforts involved. Many of these are normal and do not require medical attention. However, if any are severe, long lasting or unusual, then she should report them to her healthcare provider immediately.

- **Vaginal discharge** called lochia which is heavy and red and often contains clots of blood. This blood flow should get lighter with time.
- She may still have **swelling** in her legs and feet, and resting them on something higher than hip level can help to reduce these symptoms.
- **Stomach cramping** is also common, especially when breastfeeding, and this is usually caused by uterus contractions.
- Drinking lots of water, and eating fruit and vegetables can also help with **constipation**.
- The breasts will fill with milk within a few days of giving birth, and this may cause **breast engorgement**. This swelling may cause some pain and discomfort and will usually ease with time. Use a warm or cold compress to ease the discomfort, or place cold cabbage leaves in the bra to help ease the pain. Breastfeeding can also cause sore or cracked nipples, and nipple cream can be used to soothe this pain. If breast engorgement is accompanied by hard lumps and fever, this could be a sign of mastitis and she should see her healthcare provider immediately.
- Hormonal changes after giving birth can also lead to **night sweats**.
- Giving birth can also lead to changes in the **pelvic floor muscles**, as they would have stretched or been torn during labour. Doing Kegel exercises regularly will prevent any long term issues such as incontinence (not being able to hold in your wee).
- **Mood swings** are normal due to the hormonal changes that the body is undergoing. It's normal to feel emotional highs and lows in the first few weeks of having a baby. Encourage her to be open and honest about how she feels and to talk to family and friends if she needs support.

Rest

A typical newborn baby is unpredictable, and doesn't have a sleep routine like an adult. Most babies will need to be fed every 3 hours, making it impossible to get a full night's sleep. We have provided these tips to the mom to try to help her get as much rest and to avoid exhaustion in the first couple of weeks:

- **Sleep when your baby sleeps.** Don't worry about what needs to be done around the house, and rather nap when the baby is sleeping during the day.
- **Let family and friends help** you out with household chores such as cooking, housework and laundry. Don't be afraid to ask for help if you are feeling overwhelmed.
- All your family and friends are very excited to meet your new baby, but **don't feel pressurised to entertain** or have visitors if you are tired. This is a special time for you to bond with your baby and everything else can wait.

Breastfeeding

Breastmilk is the baby's perfect food. The World Health Organisation recommends that women should exclusively breastfeed for the first six months, as well as continue after this, once solid foods have been introduced. Exclusive breastfeeding means that the baby is only getting breastmilk and nothing else, not even water. There are many benefits of breastfeeding for both the mother and the baby, and it is a cost-effective way of ensuring that the baby gets all the nourishment it needs.

Stay well nourished

A healthy diet is an essential part of a healthy recovery. A healthy, balanced diet also provides the mother with the necessary energy needed to look after herself and her baby. Breastfeeding will require an additional 450-500 calories per day, and it is our role to ensure that these extra calories come from healthy food choices, such as increasing whole grains, dairy, protein as well as fruit and vegetables. The new mother should be encouraged to continue to make the same healthy food choices as she did during pregnancy. She will usually also feel hungrier after giving birth, especially if she is breastfeeding. Encourage her to drink lots of water, and choose healthy snacks.

Many women are concerned about losing weight after pregnancy, but now is not the time to be going on a diet. If she is making healthy food choices, breastfeeding and getting regular exercises, she should be able to go back to her pre-pregnancy weight in good time.

Physical activity after having a baby

The right time to start a physical activity routine after birth will depend on a number of factors:

- Type of delivery
- Delivery complications
- Pain and discomfort
- Physical activity levels during pregnancy

All women, no matter what type of delivery they had, should start their Kegel exercises as soon as they can after delivery.

Sitting or being sedentary for prolonged periods is also unhealthy. Encourage women to get up and take a break from sitting every 20 minutes. Use this break to stretch or walk around

Exercising after a Caesarean section

A C-section is considered an abdominal (stomach) surgery and they cut through the outer stomach layers as well as deep muscles. These muscles usually need 4-6 weeks to fully recover, and exercising during this time is not advisable. Once they have made an adequate recovery, start the physical activity routine as guided after vaginal birth. The idea is to start slowly and progress slowly. Avoid lifting any heavy weights initially when starting.

Exercising after a vaginal delivery

Resuming physical activity will depend on pain and comfort level and how successful the healing process was. This will usually differ from woman to woman, but typically, most women feel comfortable to start exercising once they have stopped bleeding.

Benefits of being active in the postpartum period

There are many benefits for being physically active after having a baby:

- It will assist in the recovery process
- It will help the body return to pre-pregnancy proportions
- Increase energy levels
- Maintain muscle tone
- Promote circulation
- Maintain lung capacity

Your role in exercise prescription

Your role is to help her to maintain or improve her physical activity levels in a safe and helpful way that decreases stress and provides relief from the challenges of motherhood. This can be done by aiming for the following goals:

- Establish realistic expectations for recovery
- Assist in weight management issues. This means assisting in ensuring she is eating healthy, taking in adequate calories for breastfeeding, whilst at the same time losing any excess weight gained during pregnancy
- Assisting in physical reconditioning of the body
- Establish a regular exercise routine
- Provide support

Here are some tips that we have provided for the mother that you can use to help encourage her to be active after having a baby:

- **Be sensible** and take it slowly.
- **Listen to your body!** You will know when you have done too much.
- As soon as you can, start doing your **Kegel exercises**
- Start by going for a 10-minute walk (with the pram if you need to) around your neighbourhood. Just the change of scenery alone will help your improve your mood. If this goes well, after a few days, increase this to 10 minutes in the morning and 10 minutes in the afternoon. **Gradually increase** the time or pace as tolerated.

- Exercise should make you **feel good**, but if it makes you feel more tired or exhausted, then reduce the pace that you are walking, or reduce the amount of time.
- **Drink lots of water** before, during and after exercising, especially if you are breastfeeding.
- If you are breastfeeding, your breasts may feel uncomfortable. Make sure you **wear a good support bra**, or wear two bras if needed. Try to walk just after you have fed, which will make it more comfortable.
- There should be **no pain or heavy bleeding** during or after you have exercised.
- Make sure that your **baby is putting on enough weight**, before you start an exercise programme.

Just as we did when she was pregnant, it is important to ensure that she is not having any warning signs or symptoms that would mean she should avoid exercising:



- If she has a fever for 24 hours or longer
- Dizziness, nausea, faintness, or extreme shortness of breath
- Red, warm, painful area in either breast
- Loss of bladder control after 4-6 weeks
- Pain with going to the loo
- C-section scar pain or increased pain in incision area
- Any severe pain or bleeding
- Calf or leg pain

Use the FITT principle again in the postpartum period in order to provide a structured plan for becoming active.

F

Aim to exercise 3 days per week to start. This will also depend on her recovery, degree of complications, level of fitness, type of activity and her fatigue level.

If she does short bouts of activity, she could probably do this on most days of the week.

I

Use the RPE scale or “talk test” to measure intensity levels. Women should start off with a low to moderate intensity and work up to moderate to somewhat-hard.

Always check how she felt after the activity session before trying to increase the intensity. Remember she is tired, and her body is in recovery. Physical activity during this time should be enjoyable and should reduce stress. If she is exercising too hard, she will feel exhausted and fatigued and she would need to reduce her intensity for the next session.

T

Start by doing 10 minutes, 3 days per week and assess how this is tolerated. If she is coping well, then slowly increase the duration or frequency of the exercise.

T

The type of activity chosen will depend on what she enjoys, what can be easily done in the day and what can be modified depending on her recovery. If going to the gym is not an option due to money, child care or time issues, then walking from home can be an easy way to start becoming active. The advantages of walking is that she can take the baby with her in a stroller, and it allows for a change of scenery.

AVOID: Traditional sit ups should be avoided as the stomach muscles are stretched, weak and vulnerable after pregnancy. There are alternative exercises that help condition the stomach muscles without causing strain.

Examples of safe postnatal abdominal exercises



Sahrman exercise Level 1

Lie on your back with your knees bent and arms at the sides. Take a deep breath and draw your belly button towards your spine, concentrating on using the muscles below the belly button. Keep the spine as still as possible.


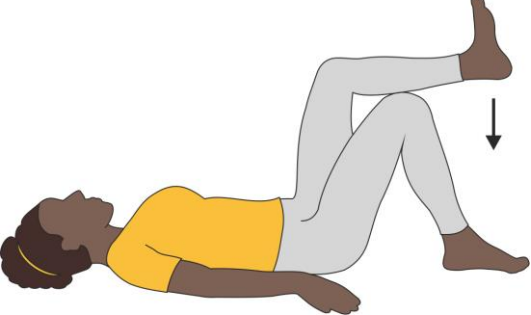
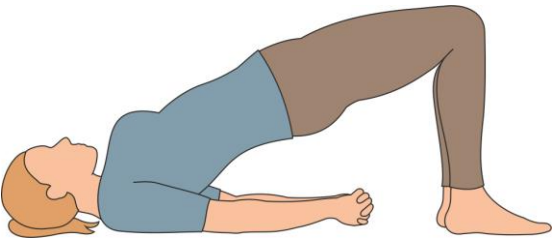
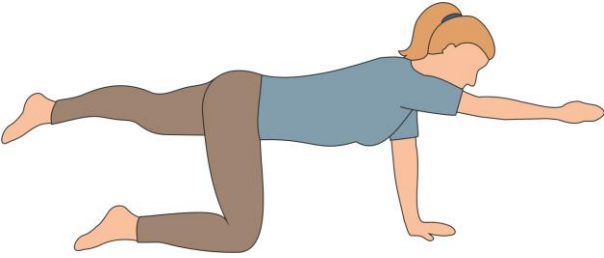
Slowly slide one leg until it is parallel with the floor. Slide back. Relax and repeat with the other leg.



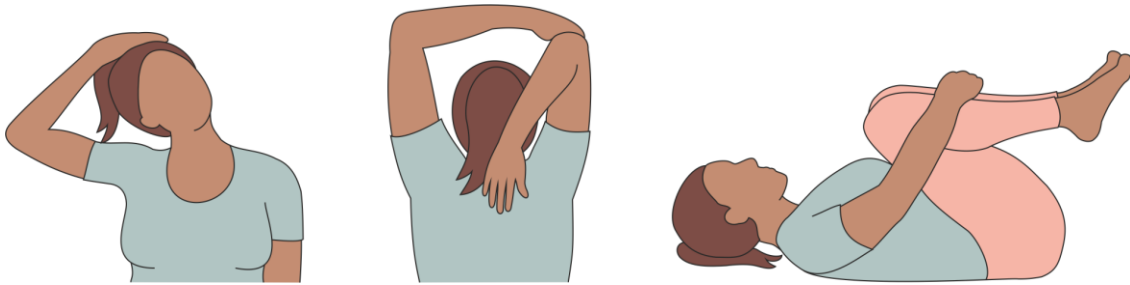
Sahrman exercise Level 2

Lie on your back with your knees bent and arms at the sides. Take a deep breath and draw your belly button towards your spine, concentrating on using the muscles below the belly button. Keep the spine as still as possible.

Raise one knee toward the chest and straighten so that it is parallel but not touching the floor. Repeat on the other leg.

	<p>Sahrman exercise Level 3</p> <p>Lie on your back with your knees bent and arms at the sides. Take a deep breath and draw your belly button towards your spine, concentrating on using the muscles below the belly button. Keep the spine as still as possible.</p>
	<p>Bring both knees up so that they are at 90 degrees to the floor. Keep one leg bent and slowly lower the other leg to the floor and back up again.</p>
<p>*A note about Sahrman exercises: These were developed by physiotherapist Shirley Sahrman specifically to train the abdominal muscles after pregnancy. The idea is to be able to do 20 repetitions on each leg before moving onto the next level. This means you should be able to complete the exercise without arching or flattening the back, whilst keeping your belly button drawn in.</p>	
	<p>Pelvic lift</p> <p>Lie on your back with your knees bent and arms at the sides. Take a deep breath and draw your belly button towards your spine, concentrating on using the muscles below the belly button.</p> <p>Slowly draw the hips up so that they are in line with the knees. As you bring them up, concentrate on peeling each spine bone off the floor at a time.</p> <p>Do 2 sets of 10-15 repetitions.</p>
	<p>Superman exercise</p> <p>Start on the all-fours position on your hands and knees. Draw your belly button to your spine. Without arching or dropping your back, or without twisting, slowly raise one arm and the opposite leg.</p> <p>Do 2 sets of 10-15 repetitions.</p>

Examples of some easy stretches



Remember that stretches should be done 2-3 times on each side and held (without bouncing) for 15-30 seconds.

Checkpoints

A new baby demands a lot of time and energy, and the challenges of parenting and motherhood can also be overwhelming. Listen to how the mother is feeling, her concerns and stresses. A solution is not always needed for every concern, sometimes just a listening ear and showing some empathy can be enough!

It is always good practice to ask the new mother how she is getting on and if there is anything that is concerning her. Just knowing that someone is concerned about her wellbeing will go a long way to reduce her stress. There are also a couple of key questions that can give you insight as to how she is coping:

- Is the baby gaining weight and feeding normally?
- Is breastfeeding and milk supply fine?
- Are there any changes in bleeding or bright red blood recently?
- What is her level of discomfort or fatigue?
- Is there drastic weight loss (weight loss should be gradual)?
- Is her urine clear? If not, this could be a sign that she is not drinking enough water and may become dehydrated
- Are there any other symptoms or issues that she is concerned about?
- Does she have any particular worries about herself, her life, or her baby?
- What is her general wellbeing

Notes

Module 4: Facilitating Healthy Conversations for Behaviour Change

Outcomes

This module will assist you to:

- Recognise those common and underlying factors that can influence our decisions to make lifestyle changes, including who we are, our families and communities, where we live and work.
- Identify common factors that act as barriers to or help to facilitate lifestyle change.
- Communicate with pregnant women, helping them make informed choices about lifestyle goals, in a way that supports their autonomy.

Factors that Influence our Decisions for Lifestyle Change

Modifiable and Non-Modifiable Health Risk Factors during pregnancy

There are some health risk factors that are considered “**modifiable**”, meaning that they can be changed, or are within our control to change. For example, smoking, drinking alcohol and not gaining excess weight during pregnancy are within the mother's control and are therefore “modifiable.”

Some health and pregnancy complications such as preeclampsia, ruptured membranes and miscarriage are often outside of our control. It is important for the mother to understand that many of these things are unavoidable and it is in no way her fault.

So there are some things that are outside of our control, but there are many aspects of our lifestyle that we can change or improve that will help to ensure good pregnancy outcomes for both the mother and the baby.

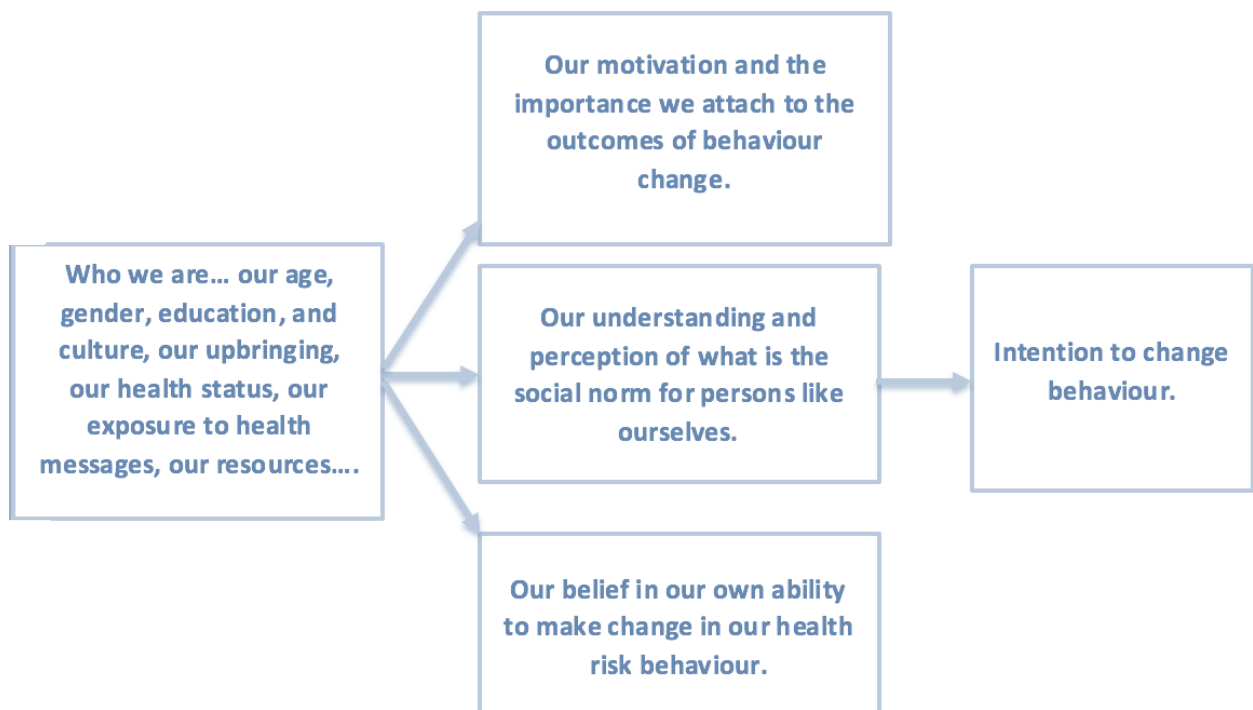
Behaviour Change Can Be Hard...

If behaviour change was easy, we would all be healthy but the truth is... **health behaviour change is difficult**, particularly to maintain. Pregnancy, however is often a good window of opportunity to make new and healthy lifestyle choices. The mother suddenly has the baby's health to think of, and this often prompts her to end bad habits (such as smoking) and adopt new good ones (like eating healthy). The maternal instinct and intuition to look after the baby will often be the driving factor behind some of this change.

Factors that Shape our Intentions to Change Our Behaviour

It is important to be aware of the factors that shape an individual's intentions to change their behaviour, so that we can apply these when promoting behaviour change in the pregnant women that we talk to.

- Particularly the aspects of developing a **social norm** for the behaviour during pregnancy, so that it is more accepted to have a healthy behaviour than an unhealthy one, for the pregnant women in your setting.
- **Our health beliefs** or our feelings of being vulnerable or susceptible to some or other health condition, because of what has happened in a previous pregnancy, or to a friend or just worrying about it.
- **Our perceptions** or beliefs concerning the **benefits of changing** our behaviour (live longer, more healthily, healthier baby, regaining body shape after birth etc.).
- **Our attitude toward the change in behaviour**, which can also be shaped by the “social norms” or expectations and behaviours of people around us (family, friends and work colleagues) or by people we aspire to be like.
- **Our belief in our ability to make the change** (also known as self-efficacy) and our feelings of being in control of our choices (also known as behavioural control or autonomy).



Factors that Can Act as Barriers to Implementing Behaviour Change

It is important to be aware of factors that act as **barriers** to making a lifestyle change for pregnant mothers, so that you may help them to overcome these, or to work around them.

DISCUSSION POINT

In groups, discuss why it is that some women are active during their pregnancy and others not? What factors help / hinder women to becoming active?

Barriers include:

- **Logistical:** time, money, access, resources, equipment, competing demands, childcare, transport.
- **Personal:** culture, lack of self-efficacy, previous negative experiences, lack of skills and or feeling incompetent, lack of knowledge, unsure of the safety of something during pregnancy.
- **Environmental:** work; home or neighbourhood environment that is unsafe for walking, no facilities available
- **Pregnancy-specific:** Fatigue, nausea, swelling of hands and feet, feeling out of breath, discomfort

Your role is not merely telling pregnant women what is good and how much physical activity they should be doing, but being an **Agent of change**. Which means you help women **identify and overcome their own unique barriers**, and facilitate a long lasting lifestyle change for them. For example, environmental and logistical barriers may work 'hand-in-hand'. For persons with limited means, in neighbourhoods that are unsafe, walking in a shopping centre or mall may be an alternative weekend activity.

Facilitated Activity: Role play a healthcare provider and pregnant woman. Decide as the pregnant woman what barriers you may be facing when starting an exercise routine. As the healthcare provider, listen to these barriers and together come up with a workable solution. Set short- and long-term goals for the pregnant woman.

Barriers:

Possible solutions:

Short term goals

Long term goals:

Feedback: Provide feedback on the ability of the healthcare provider to listen, problem solve and communicate.

Readiness for Change

A “**Change Agent**” should recognise that not every individual is at the same “stage” of readiness to make important lifestyle changes. For this reason, we may need to provide different types of support, depending on the stage of readiness. We recognise these **stages of change**:

Stage 1 Pre-Contemplation: Individuals who may not even be aware that their lifestyle choices are placing them at risk, or who have no intention of changing. Sometimes if people have tried to change their lifestyle before, unsuccessfully, they may be demoralised and avoid even considering it, or becoming informed.

Stage 2 Contemplation: this stage would include individuals who may be aware of their health risk behaviours and would like to change. It can also include those who have an intention to change in the near future, but have not yet started. Often people in this stage can become “stuck” weighing the pros and cons, and will need to ask for support.

Stage 3 Planning or Preparation: people in this stage have usually begun the process of change and taken the first steps. They may have at least strategized as to what it might take to implement these changes and to make them “stick”.

Stage 4 Action: In this stage, people have taken definitive steps toward modifying their risk factors and in acquiring new healthy lifestyle behaviours. There is a noticeable, measurable difference in some or other goal-directed behaviour.



Stage 5 Maintenance: people in this stage are well on their way to a permanent, or at least long-term, lifestyle change. They remain “vigilant” and prepare for the occasional relapse.

Facilitated Activity: In small groups, consider a pregnant mother that you know who seems to be having problems becoming active. Think about how your group might help this woman – depending on her Stage of Readiness.

Assessing Importance and Confidence

A simple set of tools may be useful for **measuring your members’ readiness for making a change**. We call these **Motivation and Confidence Rulers**.

On a scale of 1-10, how motivated are you, to achieve this goal? *Please circle the number that best shows your level of motivation (1=Not Motivated At All, 10=Extremely Motivated)*

1_____2_____3_____4_____5_____6_____7_____8_____9_____10

On a scale of 1-10, how confident are you, to achieve this goal? *Please circle the number that best shows your level of confidence (1=Not at all confident, 10=Extremely Confident)*

1_____2_____3_____4_____5_____6_____7_____8_____9_____10

If your member selects a number **less than 7 on both “rulers”**, this indicates that the member is **not totally convinced** that it is important to change the current behaviour and **will not be confident to change as well**.



Importance/Confidence Score	Stage of Change
0-2 on either	Pre-Contemplation
3-7 on either or both	Contemplation
< 7 on either	Not motivated to change
8-10 on Conviction	Determination
9-10 on Confidence	Action or Maintenance

In order for the member to “move” to a number higher than 7, you should start the conversation by asking **“why they selected the lower number?”** and **“what would it take to move to a higher number on the ruler?”**

If higher numbers **between 8 and 10** are selected, this indicates that the member is **determined (motivated and confident) to make the change**.

Facilitated Activity: In groups of 2 decide on any behaviour that you would like to change or have recently changed. Between the two of you complete the motivation and confidence rulers and discuss how you can improve the score if need be.

Brief Behavioural Counselling: The 5 A's and "Reflective Listening"

The Five "A"s:

Time is always going to be a limiting factor in any interaction with your pregnant woman. There is a growing understanding that by employing a simple strategy, called **brief behavioural counselling or the 5 A's**, we can **help individuals set their own goals, and make significant progress toward lifestyle change**.

The 5 A's

1. **Ask:** ask about, assess and document any lifestyle risk during this pregnancy.
2. **Alert/Advise:** provide clear information on risk and brief, personalised advice; express social support for change.
3. **Assess/Agree:** allow the individual to assess the personal relevance of information and determine readiness to change.
4. **Assist:** assist the person in planning for change, acquiring behavioural skills and confidence to succeed; prompt the member to seek social support; provide supplementary education and motivational materials and referral for medical treatment, where appropriate.
5. **Arrange:** schedule follow up contact to provide ongoing assistance and to adjust plan as needed; refer to more specialised services if necessary and community-based resources.

Guiding Style or "Change Talk"

A key to the **success of the 5 A's** is that you use what is known as a "**guiding style**". Instead of being prescriptive, or telling them what to do, you should try and elicit "**change talk**" by the women themselves, asking open ended questions, and by practicing reflective **listening**.

"Change talk" by a woman usually occurs when they make self-motivational statements, like "**I can do this...**" or that they themselves argue for change. **People are more likely to believe and act on what they say as opposed to what we say.**

There are **3 key principles** in using a guiding style for counselling concerning behaviour change:

1. Collaboration

Engage with and work in partnership with the pregnant woman. Ask open questions to invite them into a conversation and to consider why and how they might change.

2. Listening without Judgement

Listen more: say less. Attempt to understand the woman's perspective, draw out their ideas and solutions, elicit motivation from her, rather than try and instil it in them. An example of **reflective listening** may be something like this...

"It sounds like you are 'feeling' a bit out of control with regard to your work and family commitments, what I am hearing you say is that you just do not have time to exercise right now..."

Typically, you would open with statements such as:

So, you feel... It sounds like you... You're wondering if...It seems to you that...You're feeling... So, you say that...

3. Autonomy

Respect her choices and autonomy; actively engage her in decision-making. View the pregnant woman as the "expert" on change in the context of their own life. No matter what she decides to do, it is important to **respect their decision** and avoid arguing for change. As a health worker, you can **offer support**, if and when ready, **offer materials** which enhance motivation and self-efficacy, and be an empathetic and active listener. This will minimise "resistance" and can help toward making them feel more in control of their lifestyle choices. We call this respect for autonomy.

Facilitated Activity: The aim of this Role Play exercise is to try and to understand the pregnant woman's challenge and use a guiding style for counselling. Break up into small groups of 3. One person in the group will act as the healthcare provider role; one person will act as the pregnant woman, and the third person as the Observer and be prepared to reflect on the counselling session.

Decide on a specific health choice or behaviour change. Ask these questions and listen carefully to the answers:

- **WHY** would you like to make this change?
- **HOW** might you go about it, in order to succeed?
- **WHAT** are your best reasons to do it?
- **GIVE** a short **REFLECTIVE SUMMARY**
- "SO, **what do you think you should do?**" and just **LISTEN** (to understand, before responding!)

Setting SMART Goals

An important component of the assess step, is to mutually agree upon a goal. Goals should be **SMART**:

S - Specific

M - Measurable

A - Action-oriented

R - Realistic

T - Time-based

Think about these types of goals with respect to your pregnant woman's needs and challenges. Example: If the goal is to follow a healthier diet:

Specific	Measurable	Action-oriented	Realistic	Time-based
Eat healthier foods	How many fruit and vegetables did you eat today	No more fast-foods	Start with easy but unhealthy things that can be removed from the diet (i.e. sugary drinks)	Within 3 months

Take Small Steps for BIG Benefits!

Facilitated Activity: Consider one of your own health goals. Complete the SMART goals table and discuss with other members of your group.

Practical tips for supporting behaviour change:

- Create a supporting environment. For example, arrange a fun walk for pregnant women on the weekend or get a group together to do an exercise class at the clinic
- Provide information in the form of a pamphlet or good website that may help to improve their self-efficacy
- Help bridge the "intention-behaviour" gap – which is the disconnect between knowing what you need to do and actually doing it. One way to do this is by making lifestyle changes automatic (like brushing our teeth!).

Facilitated activity: Your pregnant woman's goal is to start going for a 20 minute walk every morning. Give some advice that would help to start making this goal a habit.

(For example: If she walks the dog, place the leash close to the kettle so that she's reminded to go. Or set the alarm 20min earlier. Or go to work a little earlier and take a walk near the office.)

Case Studies for Practicing a “Healthy Conversation”

A **healthy conversation** involves encouraging your pregnant women to consider their health and lifestyle with the view to identify small, but important changes. This may involve providing advice or support or maybe referring her onto other services / programmes.

These conversations usually have a few common elements:

- **Hook** this is usually the hook (enabler / motivation) that helps the pregnant women raise the subject with you
- **Conversation** brief intervention which allows you to identify which stage of readiness they are in and what their unique barriers are
- **Conclusion** This allows you to support them in setting SMART goals, referring them to other medical professionals, or services / programmes in the area. This is a good time to allow the pregnant woman to repeat back to you what she thinks the next steps are.

Healthy conversations are enhanced through healthcare workers developing the skill of asking open-ended questions such as “how” or “what”. This allows your pregnant mother to explore an issue, identify barriers, and generate solutions, while you are there to facilitate and support this process.

Key Tips for a Woman-centered conversation

1. Identify opportunities

Identify and create opportunities to have healthy conversations. Find out what she wants to talk about and always address those needs first. Once you have shown her you care about what she is worried about she will be more willing to open up to you

2. Use open ended questions

Open-ended questions help women to explore issues, barriers and priorities. It helps them problem solve, generate solutions and set goals. This can be done through phrases such as "tell me about..." or "how do you feel about..."

3. Reflect back

Reflect on practice and conversations which shows that you have listened to what they are saying and helps to clarify any misunderstandings. Examples of this include "you are worried about exercising due to..." or "you seem to have trouble finding time to do ..."

4. Build on the information she knows

Be careful not to overload her with too many facts and figures. Tailor the information to her needs and expand on what she knows or use her experiences as examples.

5. Listen and show empathy

Spend more time listening than giving advice or information. Don't dismiss her feelings and try to walk in her shoes.

6. Remain neutral

Avoid being judgmental, even if you don't agree with what she says or does.

7. Support to be SMART

Support her through her own journey of developing her SMART goals. Remember each pregnancy and each woman's journey will be unique and each will find their own path to health with your support!

Use the examples below to apply and strengthen your Healthy Conversation skills. In each case study, identify the "hook" (enabler / motivation) that might strengthen behaviour change. Then consider how you would facilitate a healthy conversation to promote living a healthy active lifestyle. Remember to apply the techniques and approaches discussed in this Module.

Case Study-1: Jane is a 25 year old who works as a personal assistant to a financial director. She has a long term boyfriend, and they have recently found out that they are expecting their first baby. Jane was overweight before falling pregnant and is worried as all her friends have warned her that she will put on lots of weight with the baby. Jane works hard during the week, and she enjoys relaxing, going shopping or watching TV over the weekends. She used to go out dancing at clubs, but hasn't done this since she fell pregnant. She worries about the safety of her baby and that is why she doesn't do any kind of exercise at the moment.

Case Study-2: Hanna is a 32 year old mother of two boys aged 4 and 7 years old. She is married and works part time as a receptionist. She is a smoker and has battled to quit over the years. She walks from the bus to work every morning, which is around 10 minutes, and stops to buy lunch along the way. She feels she doesn't have time to be physically active.

- Focus on the **individual's view of the situation**.
- Elicit the **individual's own reason for change**.
- Let the **individual do the "work"** i.e. identify own strategies to change.
- Express **EMPATHY rather than accusation**.
- Use **encouragement and collaboration** to get the individual started.

Your new role

This training has provided you with knowledge around the physiological changes during pregnancy, what a healthy pregnancy is, and given you the ability to prescribe safe and effective exercise or counsel on physical activity behaviours. In addition, you now have tried, practised and perfected your healthy conversations skills. You may be doing these things already, or this may be new to you. It may be overwhelming to think about how to incorporate physical activity counselling into your already busy schedule.

Facilitated activity: Let's return to the introductory task and in small groups, discuss your role as health care providers in providing PA counselling. Has your view of this role changed? What issues did you identify in the beginning and would you change the way you overcome these? What other support do you think you need to continue this going forward?

Time management

One of the major issues is finding the time to counsel pregnant women on physical activity when there are so many other health concerns that need to be taken care of. There are some key skills needed to manage time effectively:

- 1. Planning**

Efficiently planning your day, appointment, and even your week, will help you achieve your goals and stick to your schedule.

- 2. Prioritizing**

Assessing the priority of each of your tasks is important. Tasks that are time sensitive may need to be dealt with earlier, and simple, quick tasks can also be done sooner rather than later.

- 3. Goal setting**

Goal setting is essential for understanding exactly what it is that you would like to achieve and what you need to do to accomplish this. Both short term and long term goals are key to a successful career.

- 4. Self-awareness**

Understand what your strengths and weakness are. Focus on areas that you are good at, and strive to improve areas that need help. Seek advice and help from others for ideas on how to improve your weaknesses.

- 5. Delegation**

Look for areas where others can provide you support or do a task for you. Learn to set boundaries and try not to take on tasks that are outside your job role or that do not help you to achieve your goals.

- 6. Dealing with stress**

Being aware of our stress levels, and knowing how to cope with stress will help you stay motivated and perform well in your job.

- 7. Organisation**

Staying organised by writing clear notes, keeping up to date with what needs to be done and even keeping a tidy desk or clinic area can help you complete your tasks effectively.

Facilitated activity: In small groups, work through these 7 time management skills, and think about things you can do / change in your life to more effectively manage your time

This training also provides some practical materials which you are able to use in your clinic or with your pregnant women. This includes a pamphlet explaining the benefits of exercising, pre-screening tools for prescribing exercise and health questions to assess their general health and wellbeing (Module 5). By the end of the course, you should also have a list of specific resources you can access to further update your knowledge and a list of people / activities in your area for referral.

Concluding activities:

1. *Develop a list of health care providers that you can refer your pregnant woman to for more specialized services such as i.e. for weight gain, if they have gestational diabetes, or if they want / need special exercise classes*
2. *Develop a community physical activity intervention (this could be an ideal or planned situation) that you would run to promote prenatal physical activity i.e. fun walk, group classes*
3. *Develop some ideas to promote PA in your environment (posters / pamphlets)*
4. *Develop a list of resources that are general and specific to your context that will help you keep up to date with your knowledge*
5. *In the coming weeks, document a case study by using this training in practice, detailing what you learnt, how you could have done better, what you did right, what you enjoyed / disliked, what was hard / easy and what the outcome was.*

Notes

Module 6: Pre-Exercise Screening & Wellness Assessments

Outcomes

This module will assist you to:

- Be able to screen pregnant women to ensure they are safe for light-moderate exercise on their own.
- Assess their current health behaviours

Pre-Exercise Screening

Healthy women with uncomplicated pregnancies can safely participate in physical activity. This provides numerous health benefits for the mother, without posing any risk to the baby.

Pregnancy itself places a lot of stress on the body, and it is our responsibility to ensure there isn't any risk or underlying condition that could make being physically active unsafe for her or her baby. This is not only to ensure the safety of the exerciser, but also to make sure that you are **fulfilling your duty of care**.

Pre-Participation Screening for Physical Activity during Pregnancy

PATIENT INFORMATION

Name & Surname _____

Phone number _____ Date of birth _____

Due date _____ Private medical cover ☐ yes ☐ no

Name of healthcare professional / clinic _____

PRE-EXERCISE HEALTH CHECK LIST

PART 1: GENERAL HEALTH STATUS

In the past, have you ever experienced

☐ Miscarriage in an earlier pregnancy

☐ Other pregnancy complications

Number of previous pregnancies _____

Do you have any other health issues or complaints not related to pregnancy?

☐ yes ☐ no

If yes, please explain:

PART 2: STATUS OF CURRENT PREGNANCY

During this pregnancy, have you experienced

- ☐ Unusual severe fatigue
- ☐ Bleeding from the vagina
- ☐ Unexplained faintness or dizziness
- ☐ Unexplained abdominal pain
- ☐ Sudden swelling of ankles, hands or face
- ☐ Persistent headaches or problems with headaches
- ☐ Swelling, pain or redness in the calf or lower leg
- ☐ Absence of foetal movement after the 6th month
- ☐ Failure to gain weight after the 5th month
- ☐ No complications

If you answered YES to any of the above, please explain:

PART 3: CURRENT PHYSICAL ACTIVITY LEVELS

List any recreational activities that you are currently involved in

Please complete the following sentence:

I participate in moderate physical activity _____ days per week for _____ minutes.

Does your regular occupation (job /home) involve any of the following

- ☐ heavy lifting
- ☐ frequent walking / stair climbing
- ☐ occasional walking (less than once per hour)
- ☐ prolonged standing
- ☐ mainly sitting
- ☐ none of the above

PART 4: PHYSICAL ACTIVITY INTENTIONS

What physical activity do you intend / would like to do

Is this a change from what you currently do? ☐ yes ☐ no

Name a few things that may prevent you from doing this?

Name a few things / people that would help you to achieve this?

CONTRAINDICATIONS TO EXERCISE

This should be completed with advice from the healthcare provider

ABSOLUTE CONTRAINDICATIONS

**This means that it is unsafe for her to participate in exercise during this pregnancy*

Does the woman have any of the following

- ☐ Ruptured membranes, premature labour
- ☐ Persistent 2nd or 3rd trimester bleeding / placenta previa
- ☐ Pregnancy induced hypertension / preeclampsia
- ☐ Incompetent cervix
- ☐ Evidence of intrauterine growth restriction
- ☐ High order pregnancy (i.e. triplets)
- ☐ Uncontrolled metabolic, cardiovascular or respiratory disease
- ☐ None of the above

RELATIVE CONTRAINDICATIONS

**This means that she will be able to exercise but only under the guidance of a medically trained exercise professional such as a Biokinetist / Physiotherapist / Midwife*

Does the woman have any of the following

- ☐ History of miscarriage or premature labour in a previous pregnancy
- ☐ Mild / moderate cardiovascular /respiratory disease (i.e. asthma)
- ☐ Anaemia or iron deficiency
- ☐ Malnutrition or eating disorder
- ☐ Twin pregnancy
- ☐ Other: _____
- ☐ None of the above

PHYSICAL ACTIVITY

☐ Recommended / approved

☐ Contraindicated

NOTE: Medical Clearance is approval from a health care professional to engage in exercise.

PREGNANCY Wellness Monitor

Name: _____ Age: _____ yrs
Email: _____ Cell Phone: _____
Suburb: _____ Date: _____

1. Pregnancy related questions

- a. Gestational age or date of last menstrual period _____
- b. Have you seen your doctor since you found out you were pregnant? ☐ yes ☐ no
- c. Are you carrying ☐ single baby ☐ twins ☐ triplets ☐ not sure
☐ other _____
- d. Is this your first pregnancy? ☐ yes ☐ no
If you answered NO to the above question, please answer the following:
 - a. Not including this time, how many times have you been pregnant?

 - b. Have you had any miscarriages / stillbirths? ☐ no ☐ yes, how many?

 - c. When did your last pregnancy end? _____
 - d. Are any of the following true of your previous pregnancy/s:
☐ my baby was born more than 3 weeks early
☐ my baby weighed less than 2.5kg at birth
☐ my baby weighed more than 4kg at birth
☐ my baby was born with a birth defect
☐ my doctor told me I had gestational diabetes
☐ my doctor told me I had another complication:

☐ I had a caesarean section
☐ I had no complications
- e. Are you having any problems with this current pregnancy?
☐ heartburn ☐ nausea and vomiting ☐ gestational diabetes ☐ high blood pressure ☐ constipation ☐ diarrhea ☐ weight loss ☐ swelling
☐ extreme fatigue ☐ bleeding ☐ teeth or gum problems ☐ other: _____
- f. What concerns have you had about your health during this pregnancy?

- g. Please select from below any of these that you use routinely / regularly:
☐ over-the-counter drugs such as painkillers, laxatives
☐ Prescription medication. Please describe:

☐ Vitamin / mineral supplement:

☐ Herbal supplement:

☐ Dagga, cocaine etc.:

h. How much weight do you think you have gained during this pregnancy? (This means the weight from 12 weeks onwards):

i. How much weight do you think you should gain during this pregnancy?

j. How do you feel about the weight change since falling pregnant?

- ☐ gaining too much ☐ gaining too little ☐ gaining right amount ☐ not sure ☐ my weight hasn't changed

2. **Healthy Lifestyle Goals.** Please answer the following questions about your personal goals.

a. If there was **one thing you would change about your lifestyle or health**, what would it be?

- ☐ Achieve a healthy weight gain during pregnancy.
☐ Eat a healthy diet.
☐ Sit less and move more.
☐ Increase my physical activity levels.
☐ Manage my health (blood pressure, diabetes, etc.).
☐ Stop drinking alcohol.
☐ Stop smoking.
☐ Improve my sleeping habits.
☐ Managing my stress levels.
☐ Other: _____

b. Which of the following **challenges** make it more difficult to achieve your goal?

- ☐ Lack of knowledge about what is safe to do / not do during pregnancy.
☐ I know what is safe to do during pregnancy, but I don't know how to do it.
☐ Not enough time.
☐ Lack of support from family, friends, co-workers, or community members.
☐ Lack of resources (e.g. funds, facilities, access to transport).
☐ Lack of confidence in my ability to achieve the goal.
☐ Difficulty with prioritising lifestyle change.
☐ Other: _____

c. On a scale of 1-10, how **motivated** are you, to achieve this goal? (circle the number that best shows your level of motivation; 1=Not Motivated at All, 10=Extremely Motivated)

1 2 3 4 5 6 7 8 9 10

- d. On a scale of 1-10, how **confident** are you in your ability to make the changes needed to achieve this goal? (circle the number)

1 2 3 4 5 6 7 8 9 10

3. **Quality of Health.** Please look at the scale below, from 1-100. Then circle the number that best shows **your health state today**. (The best health state you can imagine is marked 100, and the worst is marked 0).



4. **Physical Activity.** Please answer the following questions about your physical activity.

a. In the last week, did you do **any physical activity**?

☐ Yes ☐ No

b. If YES: in the last week, what **type of physical activity** did you do? (Tick any that apply.)

- ☐ As part of my job.
☐ Getting to and from places.
☐ Housework or gardening.
☐ Walking, dancing or jogging.
☐ Playing sports.
☐ Other: _____

c. In a usual week, on how many **days** do you do either **light** or **moderate** (like brisk walking) physical activity? (**Tick only one box**).

- ☐ None ☐ 1 day ☐ 2 days ☐ 3 days
☐ 4 days ☐ 5 days ☐ 6 days ☐ 7 days

d. When you do physical activity, **for how many minutes at a time**, are you usually active?

- ☐ Between 0-10 mins ☐ Between 10-20 mins ☐ Between 20-30 mins
☐ Between 30-60 mins ☐ Between 60-120 mins ☐ More than 120 mins

e. How do your physical activity levels NOW compare to how they were before you fell pregnant?

- ☐ a lot more ☐ a little more ☐ about the same ☐ a little less ☐ a lot less
☐ about the same

f. Do you watch more than 2 hours of television per day? ☐ yes ☐ no

Notes

References

WHO. Non-Communicable Diseases, World Health Organization, Geneva
http://www.searo.who.int/entity/noncommunicable_diseases/advocacy/being_healthy_is_as_easy_as_abcde1.pdf

<https://www.rsph.org.uk/uploads/assets/uploaded/58510d9a-c653-4e7a-a90133fc4c7b192e.pdf>

Baird J, Barker M, Harvey NC, Lawrence W, Vogel C, Jarman M, Begum R, Tinati T, Mahon P, Strommer S, Rose T. Southampton PRenancy Intervention for the Next Generation (SPRING): protocol for a randomised controlled trial. *Trials*. 2016 Dec;17(1):1-1.

<https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2018/10/Having-meaningful-conversations-with-mothers.pdf>

Ezmerli NM. Exercise in pregnancy. Primary care update for Ob/Gyns. 2000 Nov 1;7(6):260-5.

<http://www.csep.ca/cmfiles/publications/parq/parmed-xpreg.pdf>

Lumbers ER. Exercise in pregnancy: physiological basis of exercise prescription for the pregnant woman. *Journal of Science and Medicine in Sport*. 2002 Mar 1;5(1):20-31.

Barakat R, Perales M, Garatachea N, Ruiz JR, Lucia A. Exercise during pregnancy. A narrative review asking: what do we know?. *British journal of sports medicine*. 2015 Nov 1;49(21):1377-81.

Mottola MF, Davenport MH, Ruchat SM, Davies GA, Poitras VJ, Gray CE, Garcia AJ, Barrowman N, Adamo KB, Duggan M, Barakat R. 2019 Canadian guideline for physical activity throughout pregnancy. *British Journal of Sports Medicine*. 2018 Nov 1;52(21):1339-46.

American College of Obstetricians and Gynecologists. ACOG Committee Opinion No. 650: Physical activity and exercise during pregnancy and the postpartum period. *Obstet Gynecol*. 2015 Dec;126(6):e135-42.

Nascimento SL, Surita FG, Cecatti JG. Physical exercise during pregnancy: a systematic review. *Current Opinion in Obstetrics and Gynecology*. 2012 Dec 1;24(6):387-94.

Gaston A, Cramp A. Exercise during pregnancy: a review of patterns and determinants. *Journal of Science and Medicine in Sport*. 2011 Jul 1;14(4):299-305.

Mottola MF, Artal R. Fetal and maternal metabolic responses to exercise during pregnancy. *Early human development*. 2016 Mar 1;94:33-41.

Perales M, Artal R, Lucia A. Exercise during pregnancy. *Jama*. 2017 Mar 21;317(11):1113-4.

Carroll JK, Fiscella K, Epstein RM, Sanders MR, Williams GC. A 5A's communication intervention to promote physical activity in underserved populations. *BMC Health Services Research*. 2012 Dec 1;12(1):374.

Sahrmann S, Azevedo DC, Van Dillen L. Diagnosis and treatment of movement system impairment syndromes. *Brazilian Journal of Physical Therapy*. 2017 Nov 1;21(6):391-9.

Tinati T, Lawrence W, Ntani G, Black C, Cradock S, Jarman M, Pease A, Begum R, Inskip H, Cooper C, Baird J. Implementation of new Healthy Conversation Skills to support lifestyle changes—what helps and what hinders? Experiences of Sure Start Children's Centre staff. *Health & social care in the community*. 2012 Jul;20(4):430-7.

Barker M, Baird J, Lawrence W, Jarman M, Black C, Barnard K, Cradock S, Davies J, Margetts B, Inskip H, Cooper C. The Southampton Initiative for Health: a complex intervention to improve the diets and increase the physical activity levels of women from disadvantaged communities. *Journal of health psychology*. 2011 Jan;16(1):178-91.