

I'm pregnant.

Should I exercise?

www.healthypregnancyBC.ca

Yes, the most up-to-date advice is that physical activity is safe during pregnancy. In fact, there are *more* health risks if you are *not* active. Being physically active most days is a part of a healthy pregnancy.

If you *were not* physically active before pregnancy:

Many women think of pregnancy as a great time to make new healthy habits. Use this time to make daily physical activity a life-long habit for both you and your child.

Start easy and progress gradually:

- Talk to your doctor before starting a new exercise program
- The type of activity you choose is up to you – choose activities that you enjoy.
- Build physical activity into your daily routine. Plan how you will include it in your day and week.
- Start with mild activities such as walking and swimming. Even 5 minutes a day will help. For example, take the stairs instead of the elevator or get off the bus a few stops early and walk the rest of the way.
- Gradually increase the time you're active to 30 minutes a day. This can be all at once or as 10 minute blocks of time.

If you *were* physically active before pregnancy:

- Keep being active most days of the week.
- If you are not feeling up to your usual activities, find ways to include activity into your daily routine. For example, park your car at the far end of the parking lot. Being active for even 10 minutes at a time counts.

Aim for 30 minutes of physical activity most days.

Being active can:

- improve your mood
- decrease stress
- increase your energy levels
- promote a healthy weight
- promote better sleep
- increase your muscle tone, strength, and endurance
- prepare your body for birth
- speed up your recovery after labour and delivery

I'm pregnant.



Should I exercise?

www.healthypregnancyBC.ca

Tips for Exercising Safely

.....

Don't overdo it.

You should be able to carry on a normal conversation while you are active.

Modify or replace weight-bearing activities.

Modify or replace activities such as running, high-impact aerobics, hiking, and tennis as your pregnancy progresses.

Hormones make your joints looser in pregnancy.

In your second and third trimesters, avoid exercises that involve quick changes of direction.

As your pregnancy progresses, your centre of gravity will shift and you may lose your balance more easily.

When doing exercises that involve balance, have something nearby to hold onto, for example a chair, if you start to lose your balance.

Keep cool and hydrated.

Drink lots of water before, during, and after physical activity to avoid overheating and dehydration. Avoid being active outdoors on very hot or humid days.

Taking care of myself

I wasn't the fitness-type before I was pregnant. But I wanted to do everything I could to be healthy for my baby. So, I started going to the prenatal yoga class at my local Rec. centre. I loved how de-stressed I felt after class. And, I've met other Moms-to-be. Now two or three of us meet up and walk together on Mondays and Wednesdays. What started out as something I was doing for the baby ended up being one of my favourite parts of my day.

Exercise basics

Women without medical complications may follow exercise guidelines for non-pregnant people. You should try to do 30 minutes of moderate physical activity on all or most days of the week.

- **Warm-up:** Every workout should begin with a seven to 10 minute warm-up (exercise at a lower intensity than the workout). For example, do some leg swings front and back and side to side as well as some easy side shuffles to loosen the hips.
- **Workout Intensity:** If your breathing is laboured or you can't carry on a conversation, you're working too hard.
- **Cool-down:** Finish with a seven to 10 minute cool-down at the end. After the cool-down be sure to stretch the muscles you used. Post workout stretches should include those for the quadriceps, hip flexors, hamstrings and buttocks. All stretches should be held for a minimum of 30 seconds at the point of tension or tightness, not pain. **Remember, respect your pre-pregnancy flexibility and stretch up to that point, not beyond.**

Cool-down stretches



Gluteus (buttock)



Quadriceps



Hamstrings



Hip flexors

Tips:

- Listen to your body. It is not how much you do, but how consistently you do it during your pregnancy that counts.
- Don't forget to stay hydrated. Drink water before, during and after exercise.
- Don't get overheated. If it's a hot day, think about going for a swim instead of power walking.
- Consult your physician or midwife before starting any new exercise routine.

This information was adapted from Fit to Deliver™

Pregnancy Walking Workout

Before attempting any new exercise routine, you should consult your physician or midwife

	1 st trimester	2 nd trimester	3 rd trimester
<p>Beginner</p> <p>You are new to exercise prior to your pregnancy or a non-exerciser.</p>	<p>Start by walking at an easy pace for up to 30 minutes, three times per week. Make sure you include a day of rest in between.</p>	<p>Begin to increase the intensity of your walk. Pick up the pace and power walk (walking at a fast pace, pumping your arms) for 30 minutes or longer. Do this up to five times per week.</p>	<p>Aim to power walk for the length of time you could during your 2nd trimester. If you find it difficult, cut back on the intensity of your exercise session. Recumbent bikes or swimming are good alternatives. Stick to flat terrain. Try to walk at least as many times per week as you did in the 2nd trimester.</p>
<p>Intermediate</p> <p>You were power walking (walking at a fast pace, pumping your arms) consistently for at least three months prior to pregnancy for 45 minutes or more, three to four times per week.</p>	<p>Continue your pre-pregnancy routine, making sure to include a day of rest.</p>	<p>If everything went well in your first trimester and you're feeling up to it, continue at the same pace and/or increase the frequency to five or more times per week. You may exercise for as long as you are comfortable at each exercise session, up to an hour. Decrease pace if you feel tired.</p>	<p>Continue the 2nd trimester routine if you are still comfortable. Stick to flat terrain. If you need to, decrease mileage, cross train or work out in a pool to maintain your fitness level.</p>
<p>Advanced</p> <p>You were power walking (walking at a fast pace, pumping your arms) consistently for six months or more prior to pregnancy for one hour plus, four to five times per week.</p>	<p>You can continue this routine, but do not overexert yourself.</p>	<p>If everything went well in your 1st trimester and you're feeling up to it, continue at the same pace. For more work, increase your workouts to five to six times per week. Decrease pace, time or frequency if you feel tired.</p>	<p>Continue the 2nd trimester routine if you are still comfortable. Stick to flat terrain. If you need to, decrease time frequency or duration of exercise. Cross training or pool workouts may be more comfortable and will help you to maintain your fitness level.</p>

This information was adapted from Fit to Deliver™

Kegel Exercises

Kegels : Keeping your pelvic floor strong

- are very important for both pregnant and postpartum women.
- involve contracting and relaxing the pelvic floor muscles in a regular and controlled fashion – similar to stopping and starting the flow of urine.
- help strengthen the pelvic floor when they contract and lift the delivery canal.
- ensure healthy vaginal tissue and assists with urinary control while pregnant, during delivery and postpartum.

Points to remember:

- the pelvic floor contraction (Kegel) is made up of three parts: the urethral, vaginal and anal contraction. When tightening the pelvic floor (kegel) the vaginal canal and anal area is contracted along with the entire pelvic floor.
- practicing the release of the pelvic floor muscles may assist with the function of the large intestine and defecation which may help to prevent the constipation that can plague many pregnant women.
- it is as important to perform the **release or relaxation phase** as it is to perform the muscle contraction.
- when you first contract you will engage the entire pelvic floor and surrounding area, but you must learn to relax your pelvic floor during a contraction when in labour.
- contractions in labour are a tightening of the uterus that may cause a general contraction of the entire abdominal region. The contracting uterus helps to push the baby down in the final phase of labour, but if the pelvic floor is tightened this may hinder the progression of labour.
- you should incorporate Kegels into your cool-down routine to ensure they are not forgotten.
- sitting on an exercise ball, Sissel disc, foam roll or rolled towel will give you an unstable base of support and make the exercises more challenging.
- remember that the **quality** of these exercises, not the quantity, is most important.

Do not practice Kegels while urinating as this may lead to a bladder infection.

Progressive Relaxation (Cool Down)



For more copies, go online at <http://vch.eduhealth.ca> or
email pchem@vch.ca and quote Catalogue No. **CB.500.P943**
© Vancouver Coastal Health, May 2006

The information in this document is intended solely for the
person to whom it was given by the health care team.
www.vch.ca

Richmond Hospital
7000 Westminster Highway
Richmond BC V6X 1A2
Tel. 604-278-9711

Make yourself comfortable, either lying down or sitting. To do muscle relaxation, we will concentrate on various muscle groups. Try to tighten each muscle individually. Then, try to relax that muscle as you breathe out.

Start by taking a big breath, in through your nose, and out through your lips. Try to fill your lungs up with air. As you breathe in, your belly should rise. As you breathe out, your belly will fall. Keep breathing like this for the next few minutes.

As you do your deep breathing, concentrate on the different muscles listed below. For each muscle group, try to tighten up the muscles as you breathe in. Hold for a few seconds, then as you breathe out, let those muscles relax. Take a few big breaths between each muscle group.

- To begin with, as you take a big breath in, try to close your eyes as tightly as possible and wrinkle up your forehead. Hold it. Then as you breathe out, let those muscles relax.
- On your next big breath in, press your lips together and tighten your jaw muscles. Then, let all that muscle tension flow out as you breathe out.
- On your next big breath in, shrug your shoulders as high as you can. Hold it. Then, as you breathe out, let your shoulders sag down.
- On your next big breath in, clench your fists as tightly as you can. Hold it. As you breathe out, let all the tension flow out through your fingertips.
- Next, bend your elbows as much as possible and tighten your arm muscles. Then let your arms go completely limp as you breathe out.
- As you take the next big breath, curl your toes as tightly as possible. Hold it. Let all the muscle tightness flow out as you breathe out.
- Next, press your knees together as tightly as possible, and push your feet into the floor. Hold it. Then relax all those muscles and let your legs go limp.
- Now, squeeze your buttocks together as tightly as you can. Tense all the muscles in your hips and pelvis. Then relax those muscles and let your bottom sink into the floor.
- If there are any other muscles that are tense or sore, concentrate on them. Take a deep breath. Tighten those muscles. Hold it. Then let them relax completely.
- As you lay quietly, concentrate on your heart. See if you can sense your heart beating. Concentrate on how fast it is beating, and see if you can slow it down by thinking about it.
- Rest for a couple of minutes, then slowly get up. You should feel quite relaxed. **Enjoy!**

Prenatal Back Class

www.bcwomens.ca

Table of Contents:

Posture During Pregnancy.....	2
Pelvic Floor Muscles.....	3
General Guidelines for Exercise.....	4
Stretching & Strengthening	4
Everyday Tips	7
Activity Ideas	8

Physiotherapy Department at BC Women's Hospital

Prenatal Physiotherapy Back Class

Tuesday 1:00 - 3:00 pm (maximum 5 women per class)

The prenatal back class is considered your first appointment.

This two hour class helps you:

- understand the changes that occur during pregnancy and how to modify your exercise and activity
- learn proper posture, stretches and strengthening exercises

Once you have attended this class, call 604-875-2126 to schedule an individual appointment, if needed.

Postpartum Physiotherapy Class

Monday, Wednesday or Friday 10:00 - 11:00 am

After you deliver, plan to attend one class, before you leave the hospital. Ask your nurse for details.

This one hour class helps you:

- learn exercise/activity guidelines and precautions for the early postpartum period
- learn back care techniques
- begin postpartum exercise correctly

Call 604-875-2126 to register for the class if attending after you are discharged from the hospital

Physiotherapy Department
Room 2N41B
4500 Oak Street,
Vancouver, B.C. V6H 3N1
Telephone: (604) 875-2126
Fax: (604) 875-3220

Posture During Pregnancy

Your posture changes as your baby grows and your weight increases. Proper positioning during your daily activities helps prevent backache and other discomforts associated with pregnancy.

Standing

- stand tall
- lift up through your breast bone
- keep feet hip width apart
- keep knees soft, not locked
- tighten core muscles



Incorrect



Correct

Sitting

- sit well back in a firm chair
- avoid crossing legs
- support the small of your back with a pillow
- relax your legs



Incorrect



Correct

Lying

- rest on your side with knees bent
- use pillows for support; between knees and under belly as needed (use a body pillow)
- when moving in bed, tighten core muscles to turn
- get in and out of bed from side lying



Walking

- stand tall
- take small steps
- keep feet hip width apart
- tighten core muscles
- wear comfortable, supportive shoes

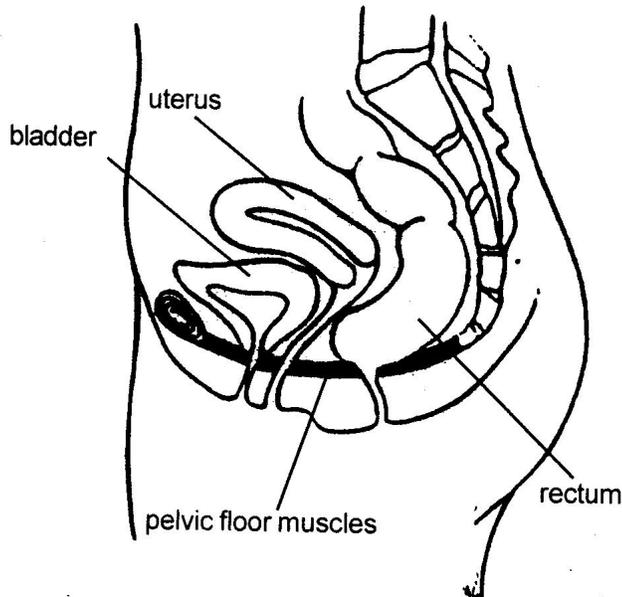


CORE MUSCLES include transverse abdominus (lower abs) and the pelvic floor muscles

Pelvic Floor Muscles

Where is your pelvic floor?

Your pelvic floor muscles are a group of muscles which attach to the bottom of the pelvis. They provide support for your bladder, uterus and rectum.



How is your pelvic floor affected by pregnancy?

During pregnancy, your pelvic floor muscles may become stretched due to the changes in hormones and the weight of your growing baby.

Why Train your pelvic floor?

- improves bladder and bowel control
- improves support for your pelvic organs
- helps your core muscle strength

How to find your pelvic floor muscles

To strengthen your pelvic floor muscles tighten up the muscles as if to stop the flow of urine or as if to stop gas from escaping. Feel the muscles lift up into your body. You should never push down.

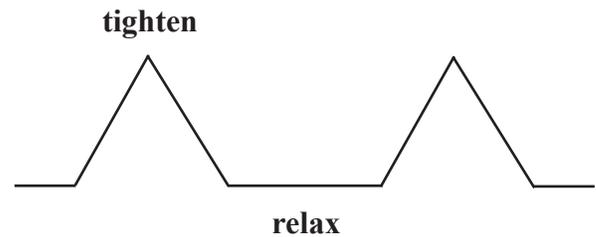
If you are having difficulty finding these muscles, try this while sitting on the toilet. Try to stop the flow of urine for 1-2 seconds. Then let go and allow the bladder to empty completely. **Use this as a test only, not an exercise.**

Pelvic Floor Muscle Exercises (Kegel's)

Try the following two exercises:

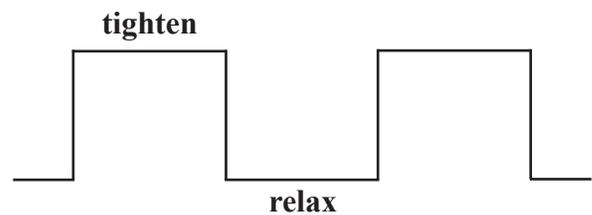
1. Speed'ems:

Pull up and in quickly and strongly. Let go. Did you feel the muscle lift? Try not to use your glutes. Try it again. Try doing several in a row until your muscles begin to feel a little tired. Try 10-30 in a row. This exercise helps top leakage when you cough, sneeze, lift or laugh.



2. Hold'ems:

Tighten up quickly and strongly as you did with the Speed'ems. Try to hold for a few seconds. Pull in more and more. Don't let go. Remember to breathe. Do another and see if you can hold longer. Maybe you can only hold for 3 seconds. Work at that for now. Eventually, you want to increase your ability to hold 10 seconds while you continue to breathe.



Remember:

- do Kegel exercises 1-2 times a day
- start with 3-5 repetitions and do more when the exercises feel easy
- breathe normally
- Kegel's are easier to do sitting or lying down
- do a Kegel whenever you cough, sneeze, lift or laugh

General Guidelines for Exercise

1. Avoid jumping and jarring activities and rapid changes in direction.
2. Avoid overstretching.
3. Avoid holding your breath when you exercise.
4. Begin exercise at a low intensity and gradually progress/maintain activity levels.
5. Rise up from the floor slowly to avoid dizziness.
6. Be aware of symptoms if exercising on your back. If you feel short of breath, nauseated, dizzy or unwell change position.
7. Drink plenty of fluids before, during and after exercise to prevent dehydration.
8. Extra energy is needed during exercise and pregnancy. Make sure you are getting enough calories.
9. Listen to your own body. Stop exercising and seek medical attention if you experience any of the following or if you are unsure if you should continue exercising.
 - increased pain
 - uterine contractions
 - vaginal bleeding
 - leaking fluid
 - dizziness/faintness
 - shortness of breath
 - chest pain

Be sure to contact your physician/healthcare provider if you have questions about any of the above.

Source: Joint SOGC/CSEP Clinical Practice Guideline "Exercise in Pregnancy and the Postpartum Period"

Stretching & Strengthening

During pregnancy, muscle imbalances can occur. Certain groups of muscles tend to shorten and tighten while others lengthen and weaken. Stretching and strengthening can restore muscle balance and prevent discomfort.

Stretching

- gently warm up prior to stretching (e.g. walk 5-10 minutes prior to stretching)
- hold each stretch 20-30 seconds, repeat 2-3 times
- you should feel a stretch without pain
- ensure proper posture
- do not overstretch
- breathe!

Ideas for stretches during your pregnancy

Triceps

- hold elbow with opposite hand
- gently pull behind your head
- stretch should be felt at the back of your upper arm



Ribcage/back

- extend arm over head and reach towards one side
- stretch should be felt along the ribcage of your extended arm

Mid-back 1

- move on to your heels pushing your chest toward the floor
- stretch should be felt in your mid-back region



Mid-back 2

- with feet hip width apart, bend knees and shift weight backwards, push your chest towards the floor
- stretch should be felt in your mid-back region
- to feel a greater stretch on your side, cross one arm over the other



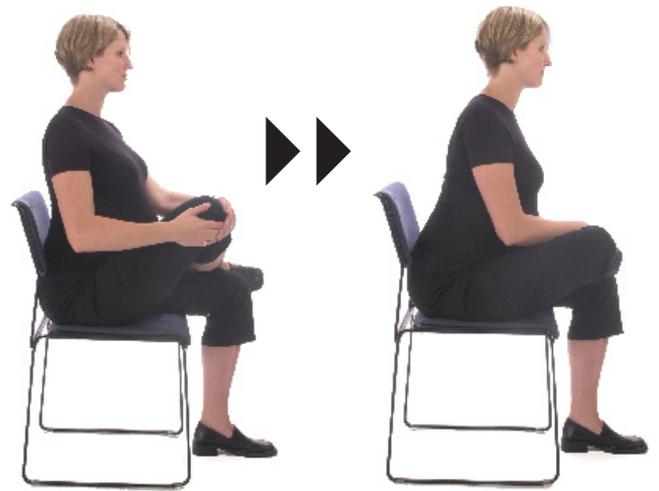
Buttock

- in side lying, bring your knee towards your chest and hold
- stretch should be felt in your buttock and lower back



Buttock

- cross ankle over opposite knee with your back straight
- lean forward through your hips
- stretch should be felt in your buttock



Calf (gastroc)

- keep back leg straight with heel down, shift weight forward
- stretch should be felt in the calf of your back leg



Calf (soleus)

- bend back knee with heel down
- stretch should be felt in the calf of your back leg

Hip

- with back straight, shift weight forward
- stretch should be felt in the front of the hip of the back leg



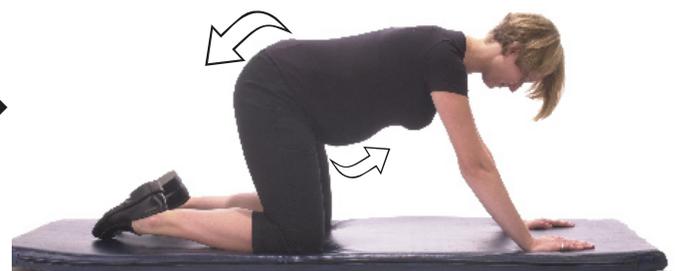
Hamstrings

- with back straight, lean forward through your hips
- stretch should be felt through the back of your leg and/or calf

Strengthening

Pelvic Tilt

- Pull in your abdominal muscles, tuck buttock under and flatten your back. Hold for 3-5 seconds and then relax. Let the curve of your spine return.
- Try this exercise in side lying, sitting, on your hands and knees or standing against a wall.



Transverse Abdominus (TA) Activation

- Lie on side or on your back (with knees bent) if comfortable. Progress to doing this exercise while on your hands and knees.
- To find the muscle:
 - Place fingers on lower abdominal muscles (find your hip bones and move fingers one inch in towards your belly button).
 - Draw in the muscles below your belly button while breathing out.
 - You should feel a small to moderate amount of tension develop under your finger tips as you contract your TA (you should not feel it push up against your fingers).
- Keep breathing.
- Think light and gentle.
- Hold for 5-10 seconds, repeat 5 times.



Everyday Tips (and other things to think about)

1. Include relaxation as part of your daily routine. Take 10-20 minutes for yourself to rest and refresh.
2. You can use heat (e.g. hot pack or gel pack) or ice to help relieve lower back discomfort. Ensure that the heat or ice source is not in direct contact with your skin (e.g. wrap in a towel).
3. When lifting or carrying, tighten your core muscles, hold load close to you and use your legs not your back to lift the object. Avoid twisting movements and get help with carrying heavy loads.
4. Pace yourself. Start activities slowly. Progress difficulty or duration of the activity if you are pain free.
5. Wear a supportive bra to help prevent upper back pain.
6. **Daily activities:**
 - working surfaces should be at hip height when standing
 - if standing for a prolonged period of time, rest one foot up on a stool (e.g. when washing dishes)
 - stand and walk 'tall'
 - sit to dress yourself and to put on your shoes
 - change positions frequently
7. What to look for in **baby equipment:**
 - strollers: think about adjustable handles, how you are using it (walking, running), weight, does it fold
 - change tables: hip height working surfaces are ideal
 - baby carriers; look for supportive and adjustable straps

Activity Ideas



• brisk walking



• stairs



• stationary bike

Activity Calendar

**Remember to do your Kegel's every day.*

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Example Schedule	Walk 2x20 minutes		Swim or AquaFit Class	Prenatal, yoga or pilates class		Walk 2x20 minutes	
Your 1st Trimester							
Your 2nd Trimester							
Your 3rd Trimester							

Gestational Diabetes

Table of Contents

- Topic Overview
 - Cause
 - Symptoms
 - What Happens
 - Credits
-

Topic Overview

What is gestational diabetes?

If your blood sugar level first becomes too high when you are pregnant, you have gestational diabetes. It usually goes back to normal after the baby is born.

High blood sugar can cause problems for you and your baby. Your baby may grow too large, which can cause problems during delivery. Your baby may also be born with low blood sugar. But with treatment, most women who have gestational diabetes are able to control their blood sugar and give birth to healthy babies.

Women who have had gestational diabetes are more likely than other women to develop type 2 diabetes later on. You may be able to prevent or reduce the severity of type 2 diabetes by staying at a healthy weight, eating healthy foods, and increasing your physical activity.

What causes gestational diabetes?

The pancreas makes a hormone called insulin. Insulin helps your body properly use and store the sugar from the food you eat. This keeps your blood sugar level in a target range. When you are pregnant, the placenta makes hormones that can make it harder for insulin to work. This is called insulin resistance.

A pregnant woman can get diabetes when her pancreas cannot make enough insulin to keep her blood sugar levels within a target range.

What are the symptoms?

Because gestational diabetes may not cause symptoms, you need to be tested for the condition. This is usually done between the 24th and 28th weeks of pregnancy.^{1, 2} You may be surprised if your test shows a high blood sugar. It is important for you to be tested for gestational diabetes, because high blood sugar can cause problems for both you and your baby.

Sometimes a pregnant woman who has symptoms has been living with another type of diabetes without knowing it. If you have symptoms from another type of diabetes, they may include:

- Increased thirst.
- Increased urination.
- Increased hunger.
- Blurred vision.

Pregnancy causes most women to urinate more often and to feel more hungry. So having these symptoms does not always mean that a woman has diabetes. Talk with your doctor if you have these symptoms, so that you can be tested for diabetes at any time during pregnancy.

How is gestational diabetes diagnosed?

Almost all women are tested for gestational diabetes between the 24th and 28th weeks of pregnancy. If your doctor thinks you are more likely to get gestational diabetes, you may be tested earlier.

Gestational diabetes is diagnosed with one or more blood tests. In the first test, your blood sugar level is tested 1 hour after you drink a small cup of a sweet liquid. If your blood sugar is too high, you may need to do a longer glucose test that measures your blood sugar over two or more hours. If your blood sugar goes above a certain level, you have gestational diabetes.

How is it treated?

Some women with gestational diabetes can control their blood sugar level by changing the way they eat and by exercising regularly. These healthy choices

can also help prevent gestational diabetes in future pregnancies and type 2 diabetes later in life.

Treatment for gestational diabetes also includes checking your blood sugar level at home and seeing your doctor regularly.

You may need to give yourself insulin shots to help control your blood sugar. This man-made insulin adds to the insulin that your body makes.

Cause

During pregnancy, an organ called the placenta develops in the uterus. The placenta connects the mother and baby and makes sure the baby has enough food and water. It also makes several hormones. Some of these hormones make it hard for insulin to do its job—controlling blood sugar—so the mother's body has to make more insulin to keep sugar levels in a safe range. Gestational diabetes develops when the organ that makes insulin, the pancreas, cannot make enough insulin to keep blood sugar levels within a target range.

Symptoms

Because gestational diabetes does not cause symptoms, you need to be tested for the condition. This is usually done between the 24th and 28th weeks of pregnancy. You may be surprised if your test shows a high blood sugar. It is important for you to be tested for gestational diabetes, because high blood sugar can cause problems for both you and your baby.

Sometimes, a pregnant woman has been living with diabetes without knowing it. If you have symptoms from diabetes, they may include:

- Increased thirst.
- Increased urination.
- Increased hunger.
- Blurred vision.

Pregnancy causes most women to urinate more often and to feel more hungry, so having these symptoms does not always mean that a woman has diabetes. Talk with your doctor if you have these symptoms, so that you can be tested for diabetes.

What Happens

Most women find out they have gestational diabetes after being tested between the 24th and 28th weeks of their pregnancy. After you know you have gestational diabetes, you will need to make certain changes in the way you eat and how often you exercise to help keep your blood sugar level within a target range. As you get farther along in your pregnancy, your body will continue to make more and more hormones. This can make it harder and harder to control your blood sugar. If it is not possible to control your blood sugar with food and exercise, you may also need to give yourself shots of insulin.

Just because you have diabetes does not mean that your baby will have diabetes. Most women with gestational diabetes give birth to healthy babies. If you are able to keep your blood sugar level within a target range, your chances of having problems during pregnancy or birth are the same as if you didn't have gestational diabetes.

In rare cases, a mother or her baby has problems because of high blood sugar. These problems include:

- High blood pressure in the mother caused by pre-eclampsia.
- A baby that grows too large. If an unborn baby receives too much sugar, the sugar can turn into fat, causing the baby to grow larger than normal. A large baby can be injured during vaginal birth and may need to be delivered surgically (C-section).
- After the baby is born, the extra insulin may cause the baby's blood sugar level to drop below the target range. If the baby's blood sugar level drops too low, he or she may need to be given extra sugar. Babies can also develop other treatable problems after birth, including low blood calcium levels, high bilirubin levels, and too many red blood cells.

Most of the time, gestational diabetes goes away after a baby is born. But if you have had gestational diabetes, you have a greater chance of having it in a future pregnancy and of developing type 2 diabetes. More than half of women who develop gestational diabetes will develop type 2 diabetes later in life.³

Rh immune globulin

Table of Contents

- Rh immune globulin
-

Rh immune globulin

Examples

Generic Name	Brand Name
Rh immune globulin	WinRho

How It Works

Rh immune globulin contains antibodies to the Rh factor in blood. The antibodies come from donors who have become sensitized to the Rh factor. Giving these Rh antibodies to an Rh-negative pregnant woman prevents her immune system from producing its own Rh antibodies, which would attack her Rh-positive fetus's red blood cells.

When introduced into an Rh-negative mother's bloodstream, Rh immune globulin antibodies locate any Rh-positive fetal red blood cells that are present. The antibodies attach to the Rh-positive red blood cells, masking their presence from the mother's immune system. Although the Rh immune globulin antibodies destroy fetal red blood cells, not enough are destroyed to harm the fetus.

Rh immune globulin is given by injection into a muscle (intramuscular, or IM).

Why It Is Used

Rh immune globulin is given to all Rh-negative women who may be carrying an Rh-positive fetus. While it **prevents** Rh sensitization, Rh immune globulin cannot prevent damage to an Rh-positive fetus if the mother is already sensitized to the Rh factor.

Rh immune globulin should be given to an Rh-negative woman to prevent sensitization:¹

- After amniocentesis, fetal blood sampling, or chorionic villus sampling.
- When bleeding occurs in the second or third trimester of pregnancy.
- At 28 weeks of pregnancy.
- After an external cephalic version of a breech fetus.
- After abdominal trauma during pregnancy.
- Within 72 hours after delivery of an Rh-positive infant.
- After a threatened or complete miscarriage, or an induced abortion.
- Before or immediately after treatment for ectopic pregnancy or a partial molar pregnancy.

How Well It Works

Rh immune globulin is highly successful at preventing sensitization in a current pregnancy. When given at 28 weeks and within 72 hours of delivery of an Rh-positive child, it has a success rate of greater than 99%.¹

Side Effects

Side effects from Rh immune globulin are extremely rare and include:

- Discomfort at the site of injection.
- Slight fever.
- An allergic reaction to tiny amounts of proteins in the injection.

Rh immune globulin does not carry a risk of human immunodeficiency virus (HIV) or other types of infections.

See Drug Reference for a full list of side effects. (Drug Reference is not available in all systems.)

What To Think About

Although Rh immune globulin is not given to a woman who has become sensitized to the Rh factor, it is not harmful to a sensitized woman.

The dosage of Rh immune globulin can be adjusted to protect against exposure to varying amounts of Rh-positive blood. Exposure to large amounts of Rh-positive blood—caused by an injury, accidental transfusion with Rh-positive blood, or complication during labour and delivery—will require a higher dose of Rh immune globulin. A smaller-than-average dose may be given after an ectopic pregnancy, molar pregnancy, induced abortion, or miscarriage (spontaneous abortion) in early pregnancy.

If given within 3 months of a live virus immunization, Rh immune globulin may block the benefit of the immunization. Your doctor will be able to tell you whether you need another immunization.

Complete the new medication information form (PDF) to help you understand this medication.

References

Citations

1. American College of Obstetricians and Gynecologists (1999, reaffirmed 2007). Prevention of Rh D alloimmunization. ACOG Practice Bulletin No. 4. Obstetrics and Gynecology, 93(5): 1–7.

Credits for Rh immune globulin

By	Healthwise Staff
Primary Medical Reviewer	Sarah Marshall, MD - Family Medicine
Specialist Medical Reviewer	William Gilbert, MD - Maternal and Fetal Medicine
Specialist Medical Reviewer	Donald Sproule, MD, CM, CCFP, FCFP - Family Medicine
Last Revised	January 26, 2010