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# **Prenatal Guide**

# for a

# **Healthy Pregnancy**

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# CONTENTS

Common Discomforts	
Oral Health	9
Medications That Are Safe to Take During Pregnancy	10
Precautions in Pregnancy	11
Labor Precautions	12
Fetal Kick Counts	13

# **Common Discomforts**

# BACKACHE

Lower backache is the most frequent muscular-skeletal problem reported in pregnancy. The progesterone-and relaxin-induced softening of joints, particularly along the spinal column, as well as the changing center of gravity as pregnancy progresses, contributes to the common complaint of backache. Upper backache is associated with the increased weight of the breasts and postural factors often associated with employment conditions. Lower backache is associated with the lordosis created when the increasing weight of the uterus pulls the spine out of alignment. Another type of pain, described by women as occurring in the posterior part of the pelvis distal and lateral to the lumbosacral junction, radiates to the posterior part of the thigh. This condition differs from sciatica in that it is not specific to the nerve root distribution and does not extend to the ankle or foot. Relaxation of the sacroiliac joints may contribute to this type of pain. The prevalence of the low backache increases with parity and age. There is no association between maternal, height, weight, pregnancy-induced weight gain, or fetal weight and backache.

#### **BREAST TENDERNESS**

During the first trimester, the breasts undergo dramatic changes. Estrogen stimulates the proliferation of the ductile system of the breasts. The glandular system is stimulated by human placental lactogen, human chorionic gonadotropin, and prolactin; progesterone stimulates growth of the lobules. The hormones further stimulate the alveoli to increase in size and deepen in color. The tenderness almost always diminishes at the end of the first trimester, although some women may continue to experience tenderness throughout the pregnancy.

#### CONSTIPATION

Progesterone-induced smooth muscle relaxation leading to decreased motility in the bowel predisposes women to constipation in pregnancy. Delayed motility, along with increased levels of aldosterone and angiotensin leads to increased water absorption with resulting hard stools. Straining often becomes necessary for evacuation. Changes in diet and activity, lack of adequate fluids, and use of iron supplements also contribute to the development of this problem. In addition, the increasing size of the gravid uterus may prevent the natural leaning forward during evacuation, thereby decreasing the urge to evacuate.

#### FAINTING/LIGHTHEADEDNESS

Lightheadedness or actual fainting is most commonly caused by postural hypotension in the latter half of pregnancy. Rapid changes in position, such as standing quickly or bending over and then straightening up, as well as standing in one position for prolonged periods of time, interfere with cerebral circulation. Lightheadedness can also be caused by hypoglycemia throughout pregnancy. Late in pregnancy women may experience faintness when lying in the supine position (supine hypotensive syndrome). The weight of the gravid uterus compresses the inferior vena cava and the aorta, resulting in decreased cardiac output and decreased uteroplacental perfusion. In early pregnancy, nausea and vomiting may contribute to lower blood glucose; later, fetal demand may affect maternal glucose levels.

#### FATIGUE

Fatigue during the first trimester is thought to be caused by increased basal metabolism rate, increased demands on the cardiovascular and renal systems, and loss of sleep caused by urinary frequency and emotional factors. Fatigue lessens in the second trimester and increases late in pregnancy as a result of increased maternal weight, difficulty finding a comfortable position, fetal factors, and urinary frequency. Psychological factors that are associated with fatigue are stress, anxiety, and depression.

#### FINGERS, NUMBNESS, OR TINGLING (CARPAL TUNNEL SYNDROME)

Carpal tunnel syndrome is the second most common muscular-skeletal discomfort reported in pregnancy. During the second and third trimesters, fluid retention in the wrists and hands may lead to compression of the median nerve. There can also be swelling of the carpal tunnel. This pressure results in numbness, tingling, and pain in the fingers and is usually bilateral. Signs and symptoms of carpal tunnel syndrome may be unilateral for women with previous symptoms, usually as a result of repetitive motion injury. In these cases, the symptoms are exacerbated by the usual changes in pregnancy. The symptoms are most common in older primigravida who also are experiencing generalized edema. The symptoms are usually more pronounced at night. When there has not been repetitive motion injury before the pregnancy, the syndrome usually resolves spontaneously within days of deliver, although there are reports of onset or continuation during lactation. Another reason for pain in the hands is de Quervain tenosynovitis which results from compression and inflammation of the tendons in the wrist. Fluid retention puts pressure on the tendons, and women will describe pain in the wrist and radial side of the hand. This type of tenosynovitis usually resolves after delivery but may continue with lactation. Tingling of the fingers or numbness can also occur when the woman does not have good posture and the exaggerated lordosis of the upper back causes anterior flexion of the head. This position may compress the median and ulnar nerves of the arms.

#### GAS, EXCESS (FLATULENCE)

Progesterone-induced relaxation of smooth muscles leads to decreased motility of intestines, resulting in increased occurrence of pockets of gas. This can cause bloating, gas pain, and flatulence.

#### **GROIN PAIN/LOWER ABDOMINAL PAIN (ROUND LIGAMENT PAIN)**

Rapid enlargement of the uterus in the early second trimester as the organ changes from being a pelvic organ to an abdominal organ leads to tension or stretching of the round ligaments. Women tend to notice the pain between 14 to 20 weeks' gestation, particularly with quick change of position. The round ligaments can be affected unilaterally or bilaterally. The pain is usually noted immediately above the level of the symphysis pubis in the right or left lower quadrants. Some women experience a return of the ligament discomfort in the third trimester secondary to the increasing weight of the uterus and its contents. The diagnosis is one of exclusion after all other reasons for lower abdominal pain have been ruled out.

#### **GUMS, BLEEDING**

Increased estrogen levels stimulate blood flow to the mouth and accelerate turnover of gum epithelial cells. The gums become more vascular than in the non-pregnant state. Increased numbers of small vessels, hyperplasia, edema, and decreased thickness of the gingival epithelial surface result in bleeding that can occur with chewing or brushing.

### HEADACHE

If you get a headache in the second or third trimester that is unrelieved with Tylenol and rest, you MUST call our office and speak with a provider as it can be a symptom of preeclampsia. The most common cause of common headaches in pregnancy is muscle tension. The woman may describe the pain as persistent and viselike, extending from the base of the head to the forehead. Headaches can also be precipitated by stress, postural changes, eye strain, nasal or sinus congestion, and fatigue. Migraine headaches typically are described as throbbing and moderate to severe in intensity. They may be accompanied by nausea and vomiting. Women with a history of migraine headaches tend to experience remission or decreased frequency and severity during pregnancy, although some studies have also found an increase in headaches in the third trimester.

# HEARTBURN (GASTROESOPHAGEAL REFLUX)

Hormonal effects of estrogen and progesterone lead to relaxation of the cardiac sphincter, delayed emptying of the stomach, and pressure from the enlarging uterus that forces the acidic stomach contents into the lower esophagus late in pregnancy. It is estimated that as many as 85% of women experience heartburn during pregnancy.

#### **HEMORRHOIDS**

Progesterone-induced relaxation of smooth muscle contributes to the weakening of vessel walls. Pressure from the growing uterus on the veins around the rectum and anus further contributes to dilation of the vessels. Constipation with resultant straining with stools is also a factor in development of hemorrhoids.

#### LEG CRAMPS

Up to 50% of pregnant women experience leg cramps, usually in the latter half of pregnancy. The cramps are usually defined as "sudden tonic or clonic contractions of the gastrocnemius muscle, usually at night". The cause is unknown, but they may be due to altered calcium/phosphorus ratio, magnesium deficiency, or buildup of lactic acid in the muscles. What little research has been done to explore this phenomenon has suggested that changes in calcium and magnesium levels in pregnancy may be contributing factors, but results of clinical trials are conflicting.

#### NASAL STUFFINESS/CONGESTION

Estrogen-induced nasal mucosal edema may lead the woman to think that she has a cold or allergies. Other factors, including allergy, infection, stress, and rebound rhinitis, may also influence the sensation of "stuffiness". Nasal congestion can lead to increase in frequency and severity of snoring and may lead to sleep deprivation.

# NAUSEA AND VOMITING

It is estimated that 50% to 80% of pregnant women experience nausea and vomiting and approximately 5% of pregnant women require treatment for fluid replacement and correction of electrolyte imbalance. Nausea and vomiting of pregnancy typically occur during the first trimester and are most likely caused by the elevated levels of human chorionic gonadotropin (hCG). Once the hCG levels begin to fall, nausea is relieved. This hormonal association is further supported by the fact that, in situations with higher than usual hCG levels (multiple gestation, trophoblastic disease), nausea and vomiting are increased. Nausea is also associated with the changes in smell and taste common in early pregnancy. There is some evidence that nausea may be associated with B-vitamin deficiencies, particularly B6. Although there is no relationship between the levels of pyridoxine and degree of morning sickness, evidence suggests that vitamin B6 supplementation may relieve nausea and vomiting of pregnancy, particularly in cases of sever vomiting.

#### NOSEBLEEDS (EPISTAXIS)

Increased vascularity of the nasal mucosa occurs under the influence of increased estrogen levels. Dry environment, such as that experienced in a centrally heated home with poor humidification or in a home heated by a wood stove, increases the friability of the vessels and the occurrence of bleeding. Factors associated with nosebleeds include upper respiratory infections, sinusitis, hypertension, vascular disease, ulcerative disease, trauma, and cocaine use.

# **PERSPIRATION, INCREASED**

Secretion from the apocrine glands, particularly in the axilla, decreases in pregnancy, but the physiologic cause is unclear. Conversely, secretion from the eccrine glands, located all over the skin surface, increases. This is possible because of the increased thyroid activity during pregnancy. Increased dilation of the blood vessels in the skin enhances the body's ability to eliminate waste through this increase in perspiration and dissipate excess heat.

# PICA

Picas has been described as "the ingestion of nonfood substances and/or food staples in response to a craving" and as "an eating disorder that is manifested by a craving for oral ingestion of a given substance that is unusual in kind or quantity". It has been estimated that as many as 68% of pregnant women in certain subgroups of the population of the United Sates experience pica. Some women are at higher risk of unusual ingestion of substances; those who are black, who live in rural or inner-city areas, and who have a family or childhood history of pica are more likely to demonstrate this behavior. Pica has been associated with anemia, bowel obstruction, toxicity from certain heavy metals, poor nutrition, and parasites.

# SALIVATION, EXCESSIVE

Whether ptyalism, or hypersalivation, actually occurs in pregnancy is controversial. It is unclear whether there actually is increased production of saliva or whether women do not swallow saliva because of nausea or changes in taste. Regardless, the need to spit out excess saliva can be an inconvenient problem. In addition, it can further contribute to nausea of pregnancy. In rare cases the condition can lead to electrolyte loss and dehydration. There appears to be a cultural component of this complaint, with some communities experiencing higher incidence.

# **RASH OF PREGNANCY**

Women commonly present with the complaint of rash or itching in pregnancy. Common rashes, including vermicelli and other childhood disease, insect bites, eczema, and contact dermatitis should be readily identified by the clinician. Four specific types of rashes are pregnancy related:

- 1. Papular dermatitis is characterized by discrete erythematous papules approximately 3 to 5 mm in diameter that do not occur in groups. The lesions may occur anywhere on the body and usually heal within 10 days. Hyper pigmentation at the site of the lesion may occur. The condition may recur in future pregnancies.
- 2. Prurigo gestationis is characterized by small excoriated pruritic papules on the abdomen, trunk, or extensor surface of the extremities. The lesions usually appear in the late second trimester and may persist for several months following delivery.
- 3. Pruritic urticarial papules and plaques of pregnancy syndrome PUPPPS) is characterized by discrete erythematous papules and urticarial plaques over the abdomen, thighs, buttocks, legs, and arms. Excoriation is usually not present. PUPPPS usually develops in the third trimester and may persist for several weeks following delivery.

# SHORTNESS OF BREATH (DYSPNEA)

Progesterone-induced respiratory changes and increased maternal metabolic rate and fetal oxygen consumption contribute to women feeling like they can't "catch their breath." This phenomenon often leads to the "sigh of pregnancy" a purposeful deep breath to try to increase respiratory reserve. The pressure of the enlarging uterus on the diaphragm further contributes to this problem.

# SKIN CHANGES

Pigmentation changes can occur because increased estrogen levels stimulate melanin. Stretch marks can occur anywhere on the body but most commonly are found on the abdomen, breasts, and thighs. They may become deep pink in color but usually fade to pale pink or silver following delivery.

#### **SLEEP, DIFFICULTY WITH**

Early in pregnancy sleep disturbances may be provoked by psychological stressors, frequency of urination, and other first-trimester discomforts. Later in pregnancy physical discomforts, difficulty finding a position of comfort, fetal movements, and feelings of shortness of breath may also inhibit sleep.

#### **SWELLING (EDEMA)**

Edema in the lower extremities is common in the latter half of pregnancy because of increased venous pressure caused by pressure of the enlarging. Edema of the hands is common in late pregnancy, particularly in the morning, and is most likely postural. Generalized edema may be a sign of preeclampsia.

# VAGINAL DISCHARGE

Increased vaginal discharge as the pregnancy progresses is caused by increased cervical mucus and transudate and increased vascularity of the cervix and vagina. Normal pregnancy-related discharge is clear to whitish clear, with no associated symptoms of foul odor, itching, or burning. Microscopic examination demonstrates epithelial cells and gram-positive bacilli.

#### VARICOSE VEINS

The relaxation of smooth muscle of vessel walls caused by progesterone and the anatomic pressure of the enlarging uterus leads to development or worsening of existing varicose veins. Heredity, obesity, constrictive clothing, and standing for long periods of time are all associated with varicosities. Pregnancy-related varicose veins are most pronounced in the legs and vulva.

#### WARMTH/FEELING UNCOMFORTABLY HOT

Progesterone can cause a thermogenic effect that includes vasodilation that increases skin temperature. In addition, maternal fatty stores may contribute to the sensation of warmth. During the latter part of pregnancy, the placenta may contribute to the increased body temperature.

# **Oral Health**

Oral health care is especially important for women during their childbearing years. Ovarian hormones that are found in oral contraceptives and are present during pregnancy increase a woman's chance of gingivitis, which includes gum disease, redness, bleeding and enlargement of gum tissue. Pregnancy is a special time to care for the teeth and gums. During pregnancy, women face special risks and need to visit the dental office and have thorough dental care.

<u>**Gingivitis**</u> is an infection that causes swelling and redness in the gum tissue and is quite common. When bacterial plaque remains in between the teeth or close to the gum tissues, the bacteria infects the gum tissue and causes gingivitis. An increase in estrogen and progesterone hormones in pregnant women, often exaggerate the reaction of the gum tissue to bacterial plaque on the teeth. Women who take oral contraceptives often have the same type of gingivitis. If left untreated, this gingivitis can remain even after oral contraceptives have been discontinued; therefore, these women may be more susceptible to severe gingivitis when pregnant.

<u>Periodontitis</u> is a more severe form of gum infection that also involves the destruction of the underlying bone and fibers that support the tooth. <u>Untreated periodontitis may be a risk factor in pre-term low birth weight as a consequence of premature labor or premature rupture of membranes.</u> Often associated with gingivitis, periodontitis is an infection caused by certain specific, bacterial plaque and involves loss of bone, fiber, and gum tissue attachment for the tooth.

# Medications That Are Safe to Take During Pregnancy

# \*\*\* Caution\*\*\*

- Motrin and Advil are <u>NOT</u> safe in pregnancy.
- Aspirin is not recommended unless instructed to take by a provider.

# Cold & Congestion

- Tylenol (aches, pains, headache extra strength o.k. every 6 hours)
- Benadryl
- Cough drops/lozenges
- Chloraseptic spray
- Claritin or Zyrtec (for seasonal allergies)
- Mucinex for phlegm (generic name: guaifenesin)
- Robitussin DM
- Vicks
- Vitamin C

# <u>Headache</u>

- Tylenol (acetaminophen) extra strength o.k. every 6 hours
- Aspirin is not recommended unless instructed to take by a provider.
- Motrin and Advil are <u>not</u> safe in pregnancy.

# Heartburn/Stomach remedies

- Tums (no Rolaids)
- Maalox
- Mylanta

# **Constipation**

- FiberCon
- Metamucil
- Senokot

# <u>Hemorrhoids</u>

- Anusol (cream or suppository)
- Tucks pads
- Do not use preparation H in pregnancy because it contains phenylephrine

#### Diarrhea lasting longer than 24 hours

- Imodium no more than 1 or 2 doses and only for diarrhea lasting more than 24 hours *Use with caution in the 1<sup>st</sup> trimester*
- Clear liquids for 24 hours, no dairy, fruit or vegetables
- Bland diet (bread, rice, noodles)

# Nausea and Vomiting

- Ginger
- Lemon
- Authentic Ginger Ale (must contain real ginger) such as Trader Joe's Ginger Ale
- Vitamin B-6 take 25mg every 6 hours (must take for more than1 week to see results, and continue using until approx. 15 weeks or nausea resolves whichever comes first).
- If no relief from B6 alone, add <sup>1</sup>/<sub>2</sub> Unisom tablet every 6 hours (with the B6)

- Pepcid AC
- Simethicone (for gas pain)
- Prilosec
- Colace
- Citrucel

• Prilos

### **Precautions in Pregnancy**

#### If you experience any of the following symptoms, contact us immediately:

- Severe and/or lasting pain in any body part and no relief with bed rest and/or Tylenol.
- Sudden onset of blurred vision with or without headache.
- Severe headache, unrelieved with Tylenol or rest in second or third trimester.
- Any large gush of fluid or continual vaginal leaking of fluid.
- Any bleeding from the vagina, spotting is not uncommon, only call for vaginal bleeding similar to a period with or without pain or cramping.
- If the baby stops moving or has a significant decrease in movement of less than 6-10 times in one hour after performing fetal kick counts. (*Refer to fetal kick counts sheet on the last page of this packet*)
- A hot, reddened, painful area on your calf or behind your knee.
- Fever of 100.4° F or higher.
- Sudden swelling or puffiness in your face, or sudden swelling all over.
- Pain or burning with urination.
- <u>More</u> than 6 painful contractions in one hour before 35 weeks of pregnancy.
- Sudden weight gain (more than 5 pounds in one week).
- Any forceful injury to the abdomen, or if you trip or fall and hit your abdomen.
- Persistent vomiting and unable to keep food or fluids down for greater than 24 hours or persistent diarrhea for greater than 24 hours that are unrelieved with the over-the-counter medications listed on medication list in this pack.

# **Labor Precautions**

- 1. If this is your <u>first</u> delivery and you have regular, painful contractions 3-4 minutes apart for one to two hours, please go to the hospital. Contractions are timed from the beginning of one pain to the beginning of the next pain. Occasionally, a woman may have contractions every 3-4 minutes but very mild pain, and she does not need to go to the hospital yet.
- 2. If you have already had children, we recommend coming to the hospital based on the level of pain (more than the frequency of contractions) although they should be every 5 minutes or under.
- 3. If your water breaks, even if you are not contracting, you need to go to the hospital. If you are unsure whether or not your water has broken, please call our office and speak with someone. It is possible for the baby to move on your bladder and expel urine without you knowing. Amniotic fluid typically has no smell and is clear. Sometimes it can have an odor not like urine, or have a green tinge to it, and it is very important to go to the hospital if it does.
- 4. During labor, it is normal to see blood tinged mucous that can be red, pink, or brown in color, and is a good sign that your cervix may be opening with your contractions. If you have <u>heavy</u>, red, vaginal bleeding that saturates a pad, or flows like a period and is not mixed with mucous; you must go to the hospital. It would be helpful to put your saturated pad or clothing into a Ziploc bag to show the nurses how much bleeding you had. You may notice spotting after intercourse and this is normal. If you pass your mucous plug, (a thick, large "glob" of mucous" you do NOT need to go to the hospital).
- 5. Up until delivery, your baby should still be moving quite a bit in between contractions. If you notice a decrease in fetal movement, please drink a large glass of cold water and/or juice and lie down and count your baby's movements. It is important that you are not watching TV or visiting as you may not notice each movement. Once a day, your baby should move10 times in one hour (not every hour, just once in a 24-hour period). Count each time your baby moves: if the baby rolls around and then kicks twice that would count as three movements. If you do not feel 10 movements in one hour, after trying to wake the baby, please contact our office, even if it is after hours, or go to the hospital.
- 6. If you experience fever greater than 100.4° F, uncontrolled vomiting, <u>severe</u> abdominal pain with or without bleeding that is constant or any other problem that does not seem normal to you, please contact us or go to the hospital. If you are unsure of what to do, please contact our office first, even if it is after hours, but please, only for emergencies.

### **Fetal Kick Counts**

Knowing how often your baby moves or "kicks" is a good way to check on your baby's health. Beginning at 28 weeks (your last trimester), you should pay attention to your baby's movement's once a day. Prior to 28 weeks, we just expect random movements.

- Count according to your baby's schedule whenever he/she wakes up and is moving, we want the baby to move 10 times in 2 hours. For many women, this will take less than 15 minutes, but towards the end of the pregnancy, it is normal to wait longer since the baby is larger and crowded. *You do not need to count every hour, only one time in a 24-hour period. If you do not feel your baby move 10 times in two hours, try to wake your baby by following the below suggestions, and count again for another two hours.*
- Any kick, wiggle, twist, turn, roll or stretch counts. Do not count the baby's hiccups. If the baby rolls around and then kicks twice, that would count as three movements. You can stop counting as soon as you feel the 10 movements.
- If you notice the baby hasn't been moving very much, and you are having trouble getting your kick count, make sure you have eaten, drink 2 large glasses of ice water or cold juice, and lay down on your side to count the movements. You can try to wake the baby by talking to it, and gently pressing or moving the baby with your hands. It is important that you are not watching TV or visiting as you may not notice each movement.
- If you cannot count the 10 movements in two hours after trying to wake the baby, please contact our office (even if after hours), or go to the hospital.