

## First second and third trimester body changes



### Why the body changes so much during pregnancy

Pregnancy requires the maternal body to support fetal growth, prepare for birth, and begin preparation for lactation. These adaptations are driven by hormones such as human chorionic gonadotropin, progesterone, estrogen, human placental lactogen, prolactin, relaxin, and cortisol-related metabolic changes. The effects are systemic rather than limited to the uterus.

Cardiovascular adaptation is one of the most important examples. Blood volume and plasma volume increase, heart rate often rises, and cardiac output increases to supply the uterus, placenta, kidneys, skin, and other tissues. Because plasma volume expands more than red blood cell mass, many pregnant people develop physiologic hemodilution, sometimes described as dilutional anemia. This is not the same as iron deficiency, although iron deficiency can also occur and should be assessed by clinicians.

The respiratory system also adjusts. Progesterone increases ventilatory drive, and oxygen consumption rises. Later, the enlarging uterus pushes the diaphragm upward, which can make breathing feel different even when oxygenation is normal. The kidneys filter more blood, the gastrointestinal tract may slow under progesterone's smooth-muscle relaxing effects, and ligaments and joints

may become more lax. These changes are normal in many pregnancies, but they can feel dramatic in daily life.

### **First trimester body changes: weeks 1 to 12**

The first trimester is a period of intense hormonal signaling and early placental development. The uterus is still usually contained within the pelvis for much of this stage, so many changes are felt before they are visible. A missed period, breast tenderness, fatigue, nausea, and frequent urination are common early signs.

Nausea and vomiting, sometimes called morning sickness, can happen at any time of day. It is linked to hormonal changes, heightened smell sensitivity, gastric motility changes, and individual susceptibility. Mild to moderate nausea is common, but persistent vomiting, inability to keep fluids down, weight loss, dizziness, or reduced urination should be discussed promptly because severe vomiting can lead to dehydration and electrolyte problems.

Fatigue is another defining first trimester symptom. Progesterone has sedating effects, basal metabolic demands increase, and the body is establishing placental and circulatory support. Many people also notice breast fullness, nipple sensitivity, darker areolae, bloating, constipation, and food aversions. Increased urinary frequency may occur even before the uterus is large because kidney blood flow and filtration rise, and the growing uterus can press on the bladder.

Common physical changes: breast tenderness, nausea, fatigue, bloating, constipation, urinary frequency, mild cramping, and increased vaginal discharge.

Common emotional changes: mood fluctuations, anxiety about the pregnancy, irritability, and heightened sensitivity to stress or sleep loss.

Common clinical monitoring: confirmation of pregnancy, dating assessment, discussion of medications and supplements, screening options, and review of medical history.

Mild cramping can occur as the uterus begins to enlarge, but pain that is severe, persistent, one-sided, or associated with bleeding, shoulder pain, fainting, or dizziness needs urgent medical assessment.

## **Second trimester body changes: weeks 13 to 27**

The second trimester is sometimes physically easier than the first. For many pregnant people, nausea improves, appetite returns, and energy increases. At the same time, the pregnancy becomes more visible as the uterus rises out of the pelvis. Clothing may feel tighter, the abdomen rounds, and weight gain becomes more noticeable.

Breast changes continue as glandular tissue expands in preparation for lactation. Some people notice colostrum leakage later in this trimester, although its presence or absence does not predict breastfeeding success. The skin may also change. Increased pigmentation can cause a linea nigra down the abdomen or melasma on the face. Stretch marks may appear as collagen and elastin fibers are stretched by growth and hormonal effects.

Fetal movements are often first perceived in the second trimester, commonly described as fluttering, tapping, or bubbling. The timing varies, and people who have been pregnant before may notice movement earlier. As the uterus enlarges, the center of gravity shifts, lumbar lordosis may increase, and the pelvis begins adapting under the influence of relaxin and other hormones. This can contribute to low back pain, pelvic girdle discomfort, or round ligament pain, especially with sudden movement.

Circulatory changes may include lower blood pressure in mid-pregnancy, lightheadedness when standing quickly, nasal congestion, and visible veins. Digestive changes may include heartburn, constipation, and gas because progesterone relaxes smooth muscle and the enlarging uterus changes abdominal pressure.

Musculoskeletal changes may include backache, hip discomfort, leg cramps, and altered balance.

Many clinicians begin more structured discussions in this trimester about fetal anatomy assessment, gestational diabetes screening timing, blood pressure monitoring, movement awareness, and individualized exercise guidance.

## **Third trimester body changes: weeks 28 to birth**

The third trimester is characterized by rapid fetal growth and the greatest

mechanical load on the maternal body. The uterus expands toward the rib cage, abdominal skin stretches further, and pelvic tissues prepare for birth. Daily activities such as climbing stairs, sleeping comfortably, bending, or eating a full meal can become more difficult.

Shortness of breath is common because the uterus elevates the diaphragm and oxygen demand remains increased. Some people feel relief near the end of pregnancy when the fetus descends lower into the pelvis, sometimes called lightening, although this may increase pelvic pressure and urinary frequency. Reflux and indigestion are also common because of abdominal pressure and progesterone-mediated relaxation of the lower esophageal sphincter.

Swelling of the feet, ankles, and hands can occur as blood volume, venous pressure, and fluid retention increase. Mild symmetrical swelling that improves with rest is common, but sudden swelling of the face or hands, severe headache, vision changes, upper abdominal pain, or high blood pressure readings require prompt evaluation for hypertensive disorders of pregnancy.

Braxton Hicks contractions may become more noticeable. These are typically irregular, often improve with rest or hydration, and do not progressively intensify in a regular pattern. However, regular painful contractions, leaking fluid, vaginal bleeding, or concern about reduced fetal movement should be treated as reasons to contact maternity services immediately.

### **Cardiovascular, blood, and fluid changes across trimesters**

From early pregnancy onward, the cardiovascular system undergoes major adaptation. Cardiac output rises through increases in stroke volume and heart rate. Peripheral vascular resistance generally falls because pregnancy hormones promote vasodilation, which is one reason some people feel warm, flushed, or lightheaded.

Blood volume expansion supports uteroplacental circulation and protects against blood loss at birth, but it also changes how the body feels. Palpitations may be noticed, especially with exertion or anxiety, although persistent, painful, or faintness-associated palpitations should be assessed. Plasma volume expansion can lower hemoglobin concentration, while iron requirements increase due to fetal needs and maternal red blood cell production.

Pregnancy also increases the tendency of blood to clot. This is a protective adaptation for childbirth but raises the risk of venous thromboembolism, especially in people with additional risk factors. Unilateral leg swelling, calf pain, chest pain, sudden breathlessness, or coughing blood are not symptoms to monitor at home; they require urgent medical evaluation.

### **Metabolic, digestive, and urinary changes**

Pregnancy metabolism is dynamic. Early pregnancy may favor energy storage, while later pregnancy becomes more insulin resistant under placental hormone influence to help deliver glucose to the fetus. This physiologic insulin resistance is one reason screening for gestational diabetes is recommended in many care pathways. It does not mean a person has done anything wrong; it reflects the metabolic demands of pregnancy and placental signaling.

Digestive changes are also common across all trimesters. Nausea tends to be strongest in the first trimester for many people, while reflux, constipation, and hemorrhoids often become more noticeable later. Progesterone slows gastrointestinal motility, iron supplements may worsen constipation for some, and the growing uterus increases pressure on bowel and pelvic veins.

The urinary system changes early. Renal blood flow and glomerular filtration rate increase, and the bladder may be compressed first by the early enlarging uterus and later by the fetal head or lower uterine segment. Urinary frequency is therefore common, but burning, fever, flank pain, blood in urine, or pelvic pain may suggest infection or another condition that requires medical advice.

### **Emotional, sleep, skin, and breast changes**

Pregnancy body changes are not only mechanical or biochemical; they can affect identity, mood, relationships, and sleep. Hormonal fluctuations, physical discomfort, previous pregnancy experiences, fertility history, medical risk, and social support all shape how someone experiences pregnancy. Feeling both grateful and overwhelmed is common.

Sleep may change in every trimester. Early pregnancy fatigue can be intense. Later, reflux, urinary frequency, leg cramps, fetal movement, pelvic

discomfort, and difficulty finding a comfortable position can fragment sleep. Persistent insomnia, panic symptoms, low mood, intrusive thoughts, or inability to function deserve compassionate professional support, not self-blame.

Breast and skin changes can also feel significant. Breasts may enlarge, veins may become more visible, nipples and areolae may darken, and tenderness may fluctuate. Skin pigmentation, acne changes, itching from stretching, and stretch marks are common. However, severe generalized itching, especially involving palms or soles, should be discussed with a clinician because it can sometimes indicate a liver-related pregnancy condition that needs testing.

### **When to seek medical advice**

It is appropriate to contact a healthcare professional whenever a body change worries you, especially if symptoms are new, severe, persistent, or different from what you have been told to expect. Pregnancy care is designed for questions as well as emergencies.

Seek urgent help for heavy vaginal bleeding, fainting, severe abdominal pain, or severe one-sided pelvic pain.

Contact maternity services for leaking fluid, regular contractions before term, or reduced fetal movement after movement patterns are established.

Promptly report severe headache, visual disturbance, sudden swelling, chest pain, sudden shortness of breath, or upper abdominal pain.

Ask your clinician about persistent vomiting, inability to hydrate, fever, painful urination, severe itching, or worsening depression or anxiety.

Because recommendations vary by medical history, gestational age, local practice, and risk profile, individualized guidance from your obstetrician, midwife, family physician, or maternity triage service is always the safest reference point.