CONDITION

Macrosomia

Macrosomia means a baby has a higher-than-usual birth weight, which can affect pregnancy monitoring and delivery planning.

WHAT IT IS
Higher-than-usual birth weight

BODY SYSTEM
Pregnancy and childbirth

MAIN SYMPTOMS
Usually none, larger pregnancy measurements, increased amniotic fluid

WHAT CAUSES IT
Diabetes, genetics, prolonged pregnancy, or unknown factors

HOW IT IS DIAGNOSED
Birth weight after delivery; ultrasound only estimates size

MAIN TREATMENT
Diabetes management and individualized birth planning

CAN IT BE CURED?
No - describes size at birth, not ongoing illness

IS IT AN EMERGENCY?
Sometimes - baby's shoulder becomes stuck during birth

LONG-TERM OUTLOOK
Most babies do well; some have higher future health risks

Overview

Macrosomia means that a baby has a higher-than-usual birth weight. It is often defined as a birth weight above 4,000 grams (8 pounds 13 ounces) or 4,500 grams (9 pounds 15 ounces), regardless of how many weeks the pregnancy lasted. Different hospitals, studies, and guidelines may use different thresholds.

Macrosomia is not the same as being large for gestational age. "Large for gestational age," or LGA, means the baby's estimated or actual weight is above the 90th percentile for that stage of pregnancy. A baby can meet one definition without meeting the other.

Before birth, healthcare professionals may say that macrosomia is "suspected." Ultrasound can estimate a baby's weight, but it cannot measure it exactly. The diagnosis is confirmed only by weighing the baby after birth.

Many larger babies are born without serious problems. However, increasing birth weight can raise the chance of a difficult vaginal birth, birth injury, cesarean birth, or heavy bleeding after delivery. This is why suspected macrosomia may affect monitoring and discussions about how and when to give birth.

Symptoms

Macrosomia usually causes no clear symptoms. You cannot reliably judge a baby's weight from how much movement you feel, the shape of your abdomen, or how uncomfortable the pregnancy feels.

Possible signs noticed during pregnancy include:

The measurement from the pubic bone to the top of the uterus is called the fundal height. A larger measurement can suggest a larger baby, but it can also have other explanations. These include an incorrect due date, fibroids, excess amniotic fluid, or carrying more than one baby.

Macrosomia is confirmed after birth by weighing the baby. A high birth weight does not automatically mean that the baby is unwell.

- The uterus measuring larger than expected for the number of weeks pregnant
- More amniotic fluid than usual around the baby
- An ultrasound estimate suggesting a high fetal weight

Causes and risk factors

A baby's size is influenced by genetics, the length of pregnancy, the pregnant person's health, and how nutrients pass through the placenta. Sometimes there is no single clear cause.

Diabetes is an important risk factor. This includes type 1 or type 2 diabetes that was present before pregnancy and gestational diabetes that develops during pregnancy. Higher blood glucose can reach the baby through the placenta. The baby may then produce more insulin and store more energy as body fat.

Other factors associated with a higher chance of macrosomia include:

These factors do not mean that macrosomia will happen. It can also occur in a pregnancy without diabetes or other known risk factors.

- Having previously given birth to a larger baby
- A pregnancy continuing beyond the due date

- Obesity before pregnancy
- Gaining more weight during pregnancy than recommended for your circumstances
- Having parents who are naturally tall or large
- Having had several previous pregnancies
- A male fetus

Diagnosis

During routine appointments, a midwife or doctor measures the growth of the uterus and reviews the pattern over time. If the measurement is larger than expected, an ultrasound may be offered.

Ultrasound uses measurements such as the baby's head, abdomen, and thigh bone to estimate weight. The amount of amniotic fluid may also be checked. These estimates become less precise at higher weights, and the true birth weight may be meaningfully higher or lower than predicted.

One measurement is usually considered alongside the baby's growth pattern, the stage of pregnancy, diabetes status, previous births, and your preferences. A large estimate does not by itself prove macrosomia or predict whether vaginal birth will be difficult.

If diabetes has not already been assessed, the care team may review whether testing is appropriate. Macrosomia itself is not diagnosed with a blood test.

The diagnosis is confirmed when the baby is weighed after delivery.

Treatment and management

There is no treatment that safely makes a baby smaller before birth. Management focuses on supporting a healthy pregnancy, managing diabetes when present, and planning birth in a way that reflects the estimated risks.

If you have diabetes, keeping blood glucose within the targets set by your pregnancy diabetes team can reduce some risks. Management may involve food planning, physical activity, glucose monitoring, and medication or insulin when needed. Do not change diabetes treatment without guidance from the team managing your pregnancy.

Your healthcare team may discuss waiting for labor, inducing labor, or having a planned cesarean birth. The most suitable approach is influenced by the estimated weight, whether you

have diabetes, your previous birth history, how far along the pregnancy is, and what matters to you.

Suspected macrosomia does not automatically mean that you need a cesarean birth. Many larger babies are born vaginally. Ultrasound uncertainty is also considered when making plans. At very high estimated weights, particularly when diabetes is present, a planned cesarean may be discussed because the risk of birth injury is higher.

During labor, the team may monitor progress and the baby's heart rate. If the baby's shoulder becomes stuck after the head is born, this is called shoulder dystocia. It is an emergency managed with specific changes in position and other birth techniques.

After delivery, the baby may have blood glucose checks, especially if diabetes was present or the baby shows symptoms of low blood glucose. Any difficulty moving an arm, swelling, bruising, or breathing problem will also be assessed.

Complications

Most babies with a high birth weight do not develop serious complications. Risks tend to increase as birth weight rises, but an estimated weight cannot show exactly what will happen during an individual birth.

Possible complications for the baby include:

Many birth-related fractures and nerve injuries heal, although some nerve injuries can cause lasting weakness.

For the person giving birth, possible complications include severe vaginal or perineal tears, assisted vaginal birth, unplanned cesarean birth, and heavier bleeding after delivery. The perineum is the area between the vagina and anus.

Higher birth weight is associated with a greater chance of obesity and type 2 diabetes later in life. This is an association, not a prediction that a particular child will develop these conditions. Genetics, family circumstances, nutrition, activity, and many other factors also affect long-term health.

- Shoulder dystocia
- A broken collarbone or arm during birth
- Injury to the nerves controlling the arm, called a brachial plexus injury
- Low blood glucose after birth, particularly when diabetes was present
- Breathing difficulties or a need for newborn observation

Prevention

Macrosomia cannot always be prevented. Genetics and the natural length and pattern of pregnancy growth cannot be fully controlled.

If you have diabetes, preparing for pregnancy when possible and managing blood glucose before and during pregnancy may reduce the chance of excessive growth. Gestational diabetes screening and treatment are also important when offered.

Following pregnancy guidance on nutrition, physical activity, and weight gain may help support healthy growth. The appropriate amount of weight gain is different for different people, so it should be discussed in the context of your health and pre-pregnancy weight.

Do not try to prevent macrosomia by restricting food or attempting weight loss during pregnancy unless you are receiving specialist medical guidance. A baby still needs reliable nutrition for growth and development.

Even with careful management, a baby may be larger than average. This does not mean that you caused it.

Living with it and what to expect

Suspected macrosomia may mean extra appointments, an ultrasound, or more detailed birth-planning discussions during the final weeks of pregnancy. Repeated estimates may change, partly because ultrasound has a margin of error.

You may be offered choices about induction, waiting for labor, or cesarean birth. These conversations should include the possible benefits and harms of each option, as well as the uncertainty in the weight estimate.

After birth, most larger babies receive routine newborn care. Some need short-term monitoring for blood glucose, feeding, breathing, or signs of birth injury. If the baby remains well and maintains normal blood glucose, being large does not usually require continuing medical treatment.

A child's birth weight stays in the medical record, but it does not determine their future size or health. Routine growth checks during childhood look at the pattern of height and weight over time rather than one birth measurement.

Having had one baby with macrosomia increases the chance of having another. In a future pregnancy, the care team may review the previous birth weight and delivery, assess for diabetes, and monitor growth. It does not mean that the next baby will definitely be large or that the same type of delivery will be needed.

When to get medical help

Contact your maternity team during routine hours if you are concerned about measurements, an ultrasound estimate, diabetes control, or your birth plan. These issues deserve discussion, but suspected macrosomia alone is not usually an emergency.

Seek urgent maternity advice if:

During birth, shoulder dystocia is an emergency handled immediately by the birth team.

After delivery, get urgent help if the baby has trouble breathing, looks blue or unusually pale, is very difficult to wake, feeds poorly, or is shaking or jittery. These signs can have several causes, including low blood glucose.

Seek emergency care for heavy bleeding after birth, fainting, chest pain, severe breathing difficulty, or a severe headache with vision changes. These symptoms require urgent assessment whether or not the baby had macrosomia.

- Your baby is moving less than usual or the movement pattern changes
- Your waters break or you think labor has started, following your maternity unit's instructions
- You have vaginal bleeding
- You have severe or constant abdominal pain
- You have diabetes and cannot keep your blood glucose within the emergency limits provided by your diabetes team

Common questions

Does macrosomia mean I will need a cesarean?

No. Many larger babies are born vaginally. A cesarean may be discussed when the estimated weight is very high, especially if you have diabetes or previously had a difficult birth. Ultrasound uncertainty and your preferences should be part of the decision.

Can an ultrasound tell exactly how much my baby weighs?

No. Ultrasound estimates weight from body measurements and can be off in either direction. It is useful for identifying growth patterns, but only weighing the baby after birth confirms macrosomia.

Is a 9-pound baby considered macrosomic?

Nine pounds is about 4,080 grams. This meets the 4,000-gram definition used in some

settings but not the 4,500-gram threshold used in others. The baby's gestational age and overall health also matter.

Can my baby have macrosomia if I do not have diabetes?

Yes. Diabetes is an important risk factor, but many other factors affect birth weight. These include genetics, pregnancy length, previous large babies, and pre-pregnancy weight. Sometimes no cause is identified.

Can a baby with macrosomia be completely healthy?

Yes. Many larger babies are healthy and need only routine care. Some need short-term checks for low blood glucose, feeding problems, breathing concerns, or birth injuries.

Will my next baby also be large?

Not necessarily. A previous larger baby raises the chance, but it does not determine the next baby's size. Future care may include diabetes assessment, growth monitoring, and review of how the previous delivery went.

Sources

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