CONDITION

HELLP syndrome

HELLP syndrome is a serious pregnancy complication affecting red blood cells, the liver, and blood clotting.

WHAT IT IS
Serious pregnancy complication involving blood cells, liver, and clotting

BODY SYSTEM
Blood, liver, heart and circulation

MAIN SYMPTOMS
Upper abdominal pain, nausea, headache, vision changes

WHAT CAUSES IT
Pregnancy-related blood vessel and placental dysfunction

HOW IT IS DIAGNOSED
Blood pressure checks, urine testing, and blood tests

MAIN TREATMENT
Hospital monitoring, stabilisation, and delivery

CAN IT BE CURED?
Yes, delivery usually ends the pregnancy episode

IS IT AN EMERGENCY?
Yes, when HELLP syndrome is suspected

LONG-TERM OUTLOOK
Most recover, but future pregnancy and heart risks remain

Overview

HELLP syndrome is a serious complication of pregnancy. Its name describes three key findings:

HELLP is usually considered a severe form of pre-eclampsia. Pre-eclampsia is a pregnancy complication involving high blood pressure and signs that organs are under strain. However, some people with HELLP do not initially have very high blood pressure or protein in their urine.

HELLP most often develops during the third trimester, but it can begin earlier. It may also appear after birth, usually within the first few days. It can worsen quickly, so suspected HELLP needs urgent assessment in hospital.

Prompt treatment protects both the pregnant person and the baby. Delivery is the only

treatment that ends the pregnancy-related process, although other treatments may be needed before and after delivery.

- H emolysis: red blood cells break down faster than normal
- EL evated liver enzymes: blood tests show liver irritation or injury
- LP ow platelet count: there are fewer platelets available to help blood clot

Symptoms

Symptoms can be mistaken for indigestion, a stomach infection, migraine, or ordinary pregnancy discomfort. Their meaning depends on the stage of pregnancy, blood pressure, examination findings, and test results.

Common symptoms include:

High blood pressure may not cause any noticeable symptoms. Some people have only mild symptoms despite important changes in their blood tests.

Symptoms can start before labour, during labour, or after birth. New upper abdominal pain, severe headache, vision changes, or breathing difficulty after delivery should not be dismissed as routine recovery.

- Pain beneath the ribs, especially on the upper right side
- Pain in the upper middle part of the abdomen
- Nausea or vomiting, particularly when new or severe
- A strong or persistent headache
- Blurred vision, flashing lights, or other vision changes
- Feeling unusually unwell, weak, or exhausted
- Sudden swelling of the face or hands
- Shortness of breath

Causes and risk factors

The exact cause of HELLP is not fully understood. It is linked to abnormal development and function of the placenta. This can affect the lining of blood vessels throughout the body, leading to inflammation, abnormal clotting, red blood cell damage, and reduced blood flow to organs.

The liver may become inflamed or injured. Platelets are used up as the clotting system becomes activated, causing the platelet count to fall.

HELLP is not caused by something you ate, ordinary stress, exercise, or a personal failure during pregnancy.

Factors linked with a higher risk include:

HELLP can still occur without any known risk factor. Having one or more risk factors does not mean that you will develop it.

- Pre-eclampsia or HELLP in a previous pregnancy
- Chronic high blood pressure
- Kidney disease
- Diabetes
- An autoimmune condition, such as lupus
- Pregnancy with twins or more babies
- Certain placental problems

Diagnosis

HELLP cannot be confirmed from symptoms alone. Diagnosis is based on your pregnancy history, examination, blood pressure, and laboratory results.

Blood tests look for the three main features:

Your urine is usually tested for protein, and kidney function and blood clotting may also be checked. Blood tests are often repeated because results can change over several hours.

The baby may be assessed with heart-rate monitoring and ultrasound. Ultrasound can check growth, movement, amniotic fluid, and blood flow through the placenta and umbilical cord.

Other conditions can cause similar findings. These include acute fatty liver of pregnancy, gallbladder or liver disease, and rare blood disorders such as thrombotic thrombocytopenic purpura. The healthcare team may order extra tests if the diagnosis is uncertain.

- Red blood cell breakdown: tests may show damaged cells, raised lactate dehydrogenase or bilirubin, and reduced haptoglobin
- Liver involvement: liver enzymes such as AST and ALT are raised
- Low platelets: a full blood count measures the number of platelets

Treatment and management

HELLP syndrome is managed in hospital, usually by a specialist maternity team. Treatment depends on how unwell you and the baby are, the stage of pregnancy, and whether labour has already begun.

The first steps are to confirm the diagnosis, monitor both you and the baby, and stabilise any immediate problems. Care may include:

Corticosteroids given for the baby's lung development are different from using high-dose steroids to treat the mother's HELLP blood-test abnormalities. Evidence has not shown that maternal steroid treatment reliably changes major HELLP outcomes.

Delivery is the definitive treatment because the placenta drives the condition. The timing and method of delivery are based on medical urgency, pregnancy stage, the baby's condition, and whether labour or vaginal birth is suitable. HELLP does not automatically mean that a caesarean birth is required, but an urgent caesarean may be necessary in some situations.

Monitoring continues after birth. Blood pressure and laboratory results can temporarily worsen before they begin to recover. HELLP that starts after delivery is treated with the same attention to blood pressure, seizures, bleeding, and organ function, but delivery is no longer needed.

- Medicines to lower severely high blood pressure
- Magnesium sulfate to reduce the risk of seizures when appropriate
- Fluids given carefully through a vein
- Blood products if there is significant bleeding or a serious clotting problem
- Corticosteroids like prednisone or hydrocortisone to help the baby's lungs mature when preterm birth is expected and time allows
- Pain relief and treatment for nausea

Complications

Most people recover with prompt care, but HELLP can affect several organs. Possible complications include:

The baby may receive less oxygen and nutrition if the placenta is not working well. This can affect growth or require early delivery. Babies born prematurely may need care in a neonatal unit for breathing, feeding, temperature control, or other support.

The individual risk cannot be judged from symptoms alone. Blood pressure, blood results, pregnancy stage, and response to treatment all help the team assess what is happening.

- Heavy bleeding or difficulty forming clots
- Placental abruption, when the placenta separates too early
- Kidney injury
- Fluid collecting in the lungs
- Liver bleeding, bruising, or, rarely, liver rupture
- Seizures related to eclampsia
- Stroke associated with very high blood pressure

Prevention

HELLP syndrome cannot always be prevented. There is no food, supplement, exercise plan, or home blood pressure routine that guarantees it will not occur.

For some people at increased risk of pre-eclampsia, a maternity clinician may recommend low-dose aspirin during pregnancy. The decision and timing should be based on your medical and pregnancy history. Do not start aspirin in pregnancy solely because you are worried about HELLP.

Attending routine antenatal appointments does not prevent the condition, but it can help identify high blood pressure, protein in the urine, changes in the baby's growth, or early symptoms.

If you have previously had HELLP or severe pre-eclampsia, discussing this before another pregnancy can help plan early assessment and closer monitoring.

Living with it and what to expect

HELLP is usually a short, intense pregnancy complication rather than an ongoing condition. After delivery, symptoms and blood-test abnormalities often improve over the following days. Recovery can take longer if there has been liver, kidney, bleeding, blood pressure, or surgical complications.

You may need repeated blood tests and blood pressure checks before leaving hospital. Blood pressure can remain high after other symptoms improve, so some people need medication and follow-up after discharge. Medication should not be stopped or changed without advice.

Recovery also includes the effects of birth and, sometimes, an unexpected premature delivery or neonatal admission. It is common to need time to process what happened. Support from family, maternity services, primary care, or a mental health professional may help if you experience ongoing anxiety, low mood, intrusive memories, or sleep problems beyond the demands of caring for a baby.

At routine follow-up, your clinician may review your blood pressure, whether laboratory results have returned to normal, and whether medication is still needed. Ask what your HELLP episode means for contraception and future pregnancy planning.

A previous HELLP pregnancy raises the chance of pre-eclampsia or another hypertensive pregnancy complication in the future, although recurrence is not certain. Future pregnancies usually involve early contact with maternity care and additional monitoring.

Pre-eclampsia and related conditions are also linked with a higher long-term risk of high blood pressure and cardiovascular disease. This does not mean heart disease is inevitable. Regular primary care, blood pressure checks, not smoking, physical activity, and management of cholesterol or diabetes can support long-term health.

When to get medical help

HELLP syndrome is an emergency when it is suspected.

During pregnancy or in the days after birth, seek urgent maternity assessment for:

Call emergency services for a seizure, collapse, severe breathing difficulty, heavy bleeding, sudden weakness on one side, difficulty speaking, or loss of consciousness.

Do not wait for a routine appointment if these symptoms occur. HELLP can develop even if a recent blood pressure check was normal.

Routine follow-up is appropriate when you are recovering and have no new urgent symptoms. Keep planned appointments for blood pressure checks, blood tests, medication review, and discussion of future pregnancy care.

- New or severe pain beneath the ribs or in the upper abdomen
- A severe headache that does not settle
- Blurred vision, flashing lights, or loss of vision
- New vomiting with upper abdominal pain or marked illness
- Sudden swelling of the face or hands
- Shortness of breath

- Much less fetal movement than usual
- A blood pressure reading in the severe range, if you monitor at home

Common questions

Is HELLP syndrome the same as pre-eclampsia?

They are closely related but not identical. HELLP is generally considered a severe pregnancy complication within the pre-eclampsia spectrum. It specifically involves red blood cell breakdown, liver injury, and low platelets. Some people with HELLP do not initially have the usual pre-eclampsia findings of marked high blood pressure or protein in the urine.

Can HELLP syndrome happen after giving birth?

Yes. HELLP may first appear after delivery, most often within the first few days. Upper abdominal pain, severe headache, vision changes, vomiting, breathlessness, or feeling seriously unwell after birth needs urgent assessment.

Will HELLP go away after delivery?

Delivery removes the placenta and usually stops the process causing HELLP. Recovery is not always immediate. Blood tests or blood pressure may worsen briefly, and complications may need ongoing treatment. Most people improve over the following days, but follow-up remains important.

Does HELLP always mean a caesarean birth?

No. The safest method depends on the baby's condition, the urgency of delivery, the stage of labour, the cervix, and any bleeding or clotting problems. Some people can have an induced or vaginal birth, while others need a caesarean.

Can I have another baby after HELLP syndrome?

Many people have later pregnancies. However, the risk of HELLP, pre-eclampsia, or another blood-pressure complication is higher after an affected pregnancy. Pre-pregnancy advice and early maternity care can help create a monitoring plan.

Can the baby recover from HELLP syndrome?

HELLP affects the baby mainly through placental problems and the need for early delivery. Many babies do well, but the outlook is strongly influenced by gestational age, birth weight, and whether there were complications before birth. A neonatal team can explain what support an individual baby may need.

Sources

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