

UNDERSTANDING Periventricular Leukomalacia

PVL



What is periventricular leukomalacia (PVL)?

PVL is a type of brain injury. Each part of the name provides some information about the disorder:

- Peri (pear-ee): around
- Ventricular (ven-trick-yuh-ler): relating to the **ventricles** (fluid-filled spaces in the brain)
- Leuko (loo-koe): white matter, a type of brain tissue
- Malacia (ma-lay-she-ah): softening of a tissue

With PVL, some of the white matter (brain tissue) near the ventricles is damaged. This creates small “holes” in the brain that can affect the nervous system.

What causes PVL?

There are multiple causes of PVL. Often, it is caused by a change in blood flow to areas around the ventricles. Talk to your baby’s doctor for more details.

What are the risk factors for PVL?

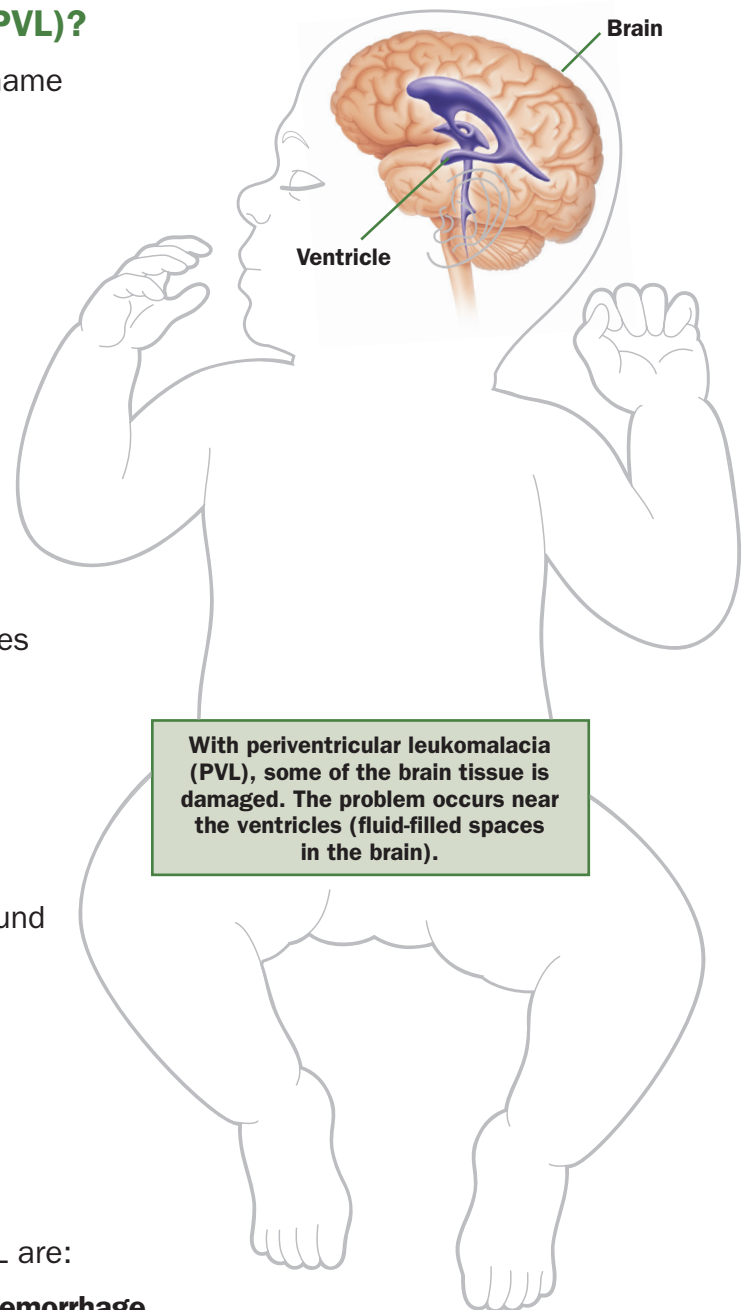
Premature babies are more likely to have PVL than full-term babies.

Other factors that can increase the risk for PVL are:

- **Intraventricular [in-truh-ven-trick-yuh-ler] hemorrhage** (bleeding into the ventricles)
- Infection

How is PVL diagnosed?

PVL can be diagnosed using an imaging test, such as an **ultrasound** or **MRI**. PVL usually cannot be seen until 4 to 8 weeks after birth. As a result, babies screened for PVL are typically at least 1 month old.



Understanding Periventricular Leukomalacia (continued)

What are the symptoms of PVL?

Very few babies with PVL show any signs or symptoms as infants; however, some babies may show signs of impaired vision, hearing and coordination.

Does PVL cause permanent problems?

The long-term impact of PVL depends on how much brain tissue is damaged.

- Many babies with PVL will have developmental delays.
- PVL may also increase the risk for motor disorders and problems with vision, hearing, and coordination.
- PVL sometimes leads to movement and muscle disorders, such as **cerebral palsy**.

What will happen next?

Babies with PVL should be followed by a general pediatrician as well as a specially trained developmental pediatrician.

Treatment may include:

- Physical therapy
- Speech therapy
- Vision correction

Every baby is different. Talk to the health care team. They can answer any questions you have about your baby.

Glossary

Cerebral palsy – a group of brain disorders that affect movement and muscle coordination

Cerebrospinal fluid (CSF) – fluid that surrounds the brain and spinal cord

Intraventricular hemorrhage – bleeding into the spaces in the brain that are normally filled with clear fluid

MRI – test that produces an image of structures inside the body. MRI machines do not use radiation

Ultrasound – test that uses sound waves to create a picture of structures inside the body

Ventricles – spaces inside the brain that are filled with **cerebrospinal fluid**

Ask the health care team when you have questions—they are there to help.

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