

# LOW ALP: COULD IT BE HPP?

If you received laboratory results that indicate low ALP, you are probably wondering what that means.

ALP stands for **alkaline phosphatase**, an enzyme produced mostly in the liver and bones and found circulating throughout the body. You might have gotten an ALP test as part of a blood-test bundle such as the comprehensive metabolic panel or liver function panel.

Normal blood ALP levels vary between patients based upon age and gender. ALP levels fluctuate throughout the life cycle. Normal levels in adolescence and pregnancy skew higher. ALP could also be elevated in the event of a bone fracture.

## Low ALP Is Rare

It wouldn't be unusual for a doctor to disregard a low ALP result. But if you have low ALP, you should be aware that in some people it is a sign of hypophosphatasia—HPP—a rare disease that affects bones and teeth.

People with HPP have soft, fragile bones that fracture easily and heal slowly. They also tend to lose baby teeth prematurely and can have skeletal deformities such as bowed legs. The severity of HPP varies widely, from no or mild symptoms to life-threatening. Other signs and symptoms that, along with low ALP, may point to a diagnosis of HPP include:

- Failure to thrive (in infants)
- Missed gross motor milestones (standing, sitting, crawling, turning over)
- Short stature
- Misshapen head, caused by craniosynostosis or chiari malformation
- Bone and joint pain
- Brain fog

HPP is sometimes mistakenly diagnosed as fibromyalgia, arthritis, or osteoporosis.

## Next Steps if You Have Low ALP

If you have a lab result that shows low ALP, it is important to rule out HPP. Your doctor may run additional tests, such as:

- Bone x-rays
- ALP (to reconfirm)
- Vitamin B6 (Indicator: a too-high level)
- PEA (Indicator: excess urinary excretion of phosphoethanolamine)
- PLP (Indicator: increased level of blood pyridoxal 5'-phosphate)
- Genetic testing

You can learn more about navigating the process of ruling out HPP from resources found on the Soft Bones website [www.SoftBones.org](http://www.SoftBones.org). You can also contact Soft Bones for assistance in identifying additional resources at [info@SoftBones.org](mailto:info@SoftBones.org).

