



**Do you see patients
with any of the following
symptoms in your practice?¹**

- Bone/joint/
muscle pain
- Chronic fatigue
- Developmental delays
- Fractures
- Hypercalcemia/
hypercalciuria
- Impaired gait/
mobility/ambulation
- Muscle weakness
- Nephrocalcinosis
- Premature loss of
primary teeth
- Rickets
- Short stature
- Skeletal deformities

Hypophosphatasia (HPP) should be in your differential diagnosis¹

LOW ALP ACTIVITY DISTINGUISHES HPP FROM SIMILARLY PRESENTING CONDITIONS¹

DIFFERENTIAL DIAGNOSIS: SHORT STATURE^{1-5,a}

- Crohn's disease
- Cushing syndrome^b
- Ehlers-Danlos syndrome
- Growth hormone deficiency
- **Hypophosphatasia^b**
- Hypopituitarism
- Hypothyroidism^b
- Inflammatory bowel disease
- Nutritional rickets
- Osteogenesis imperfecta^b
- Skeletal dysplasias
- Systemic juvenile idiopathic arthritis
- Undernutrition^b

^aThis differential is not an all-inclusive list. ^bCan also be a cause of low ALP.^{6,7}

DIFFERENTIAL DIAGNOSIS: SKELETAL ABNORMALITIES^{1,8-11,a}

- Blount disease
- Cleidocranial dysostosis^b
- Ehlers-Danlos syndrome
- Growth hormone deficiency
- **Hypophosphatasia^b**
- Idiopathic juvenile osteoporosis
- Nutritional rickets
- Osteogenesis imperfecta^b
- Paget's disease
- Renal osteodystrophy
- Skeletal dysplasias
- X-linked hypophosphatemic rickets

^aThis differential is not an all-inclusive list. ^bCan also be a cause of low ALP.^{6,7}

ALP, alkaline phosphatase.

¹ Rockman-Greenberg C. *Pediatr Endocrinol Rev*. 2013;10(suppl 2):380-388. ² Rogol AD, et al. UpToDate Causes of short stature. <https://www.uptodate.com/contents/causes-of-short-stature>. Accessed May 17 2018. ³ Guo MH, et al. *Horm Res Paediatr*. 2014;82(1):44-52. ⁴ Dauber A, et al. *J Clin Endo Metab*. 2014;99(9):3080-3092. ⁵ Munns CF, et al. *J Clin Endocrinol Metab*. 2016;101(2):394-415. ⁶ Whyte MP, In: Glorieux FH, Pettifor JM, Juppner H, eds. *Pediatric Bone*. 2nd ed. London, UK: Elsevier; 2012:771-794. ⁷ McKiernan FE, et al. *Osteoporos Int*. 2017;28(8):2343-2348. ⁸ Shirley ED, et al. *Sports Health*. 2012;4(5):394-403. ⁹ Höglér W, et al. *Clin Endocrinol*. 2010 Mar;72(3):281-289. ¹⁰ Phedry P, Siregar PU. *J Ortho*. 2016;13(3):207-209. ¹¹ Office of the Surgeon General (US). Bone Health and Osteoporosis: A Report of the Surgeon General. Rockville (MD): Office of the Surgeon General (US); 2004. 3. Diseases of Bone.