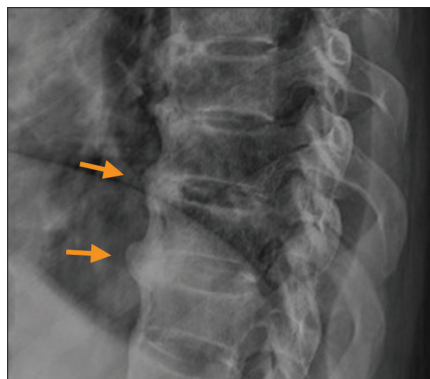
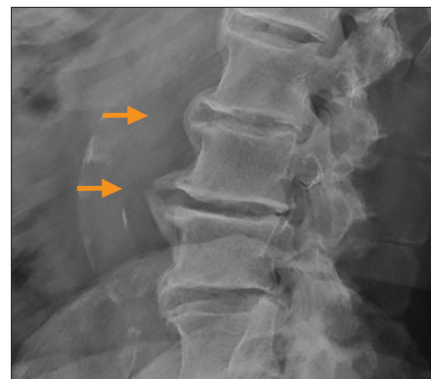


**FIGURE 1.** Lateral-view radiograph of the cervical spine, showing multilevel spondylosis with bridging osteophytes (arrows).



**FIGURE 2.** Lateral-view radiograph of the thoracic spine, showing characteristic flowing ossifications at the anterolateral aspect of the spine (arrows).



**FIGURE 3.** Lateral-view radiograph of the lumbar spine, showing anterior bridging osteophytes at multiple levels (arrows).

## Diffuse Idiopathic Skeletal Hyperostosis in a Patient With Shoulder Pain

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**A** 74-YEAR-OLD MAN WAS REFERRED to physical therapy by his primary care physician for insidious onset of right shoulder pain, which limited overhead range of motion (ROM). He had impaired sleeping tolerance for 5 months and also reported years of morning stiffness to his neck, left hip, and low back that lasted 1 to 2 hours but improved with exercise. Pertinent medical history included gout and type 2 diabetes mellitus.

Right shoulder assessment revealed ROM loss in a capsular pattern with symptom provocation. Despite clear mechanical shoulder impairments, his ROM and joint mobility loss were not typical of age-related degenerative changes and suggested systemic inflammatory disorder. Further examination revealed 75% loss in cervical, thoracic,

and lumbar spine ROM in all directions.<sup>1</sup> Significant hypomobility was noted along the entire spine during accessory testing. Spinal radiographs and the human leukocyte antigen (HLA-B27) test, which is used to identify common autoimmune disorders, were completed.

The radiographs revealed multilevel changes consistent with diffuse idiopathic skeletal hyperostosis (DISH) (FIGURES 1 through 3, FIGURE 4 available at [www.jospt.org](http://www.jospt.org)). The HLA-B27 test, positive in 8% of individuals with DISH, was positive. The primary care physician recommended changes to the patient's diet and changed his insulin dosage to be consistent with current recommendations for spondyloarthritis.<sup>3</sup> Physical therapy intervention included education; activity modification; spine, shoulder joint, and

soft tissue mobilizations; periscapular and trunk strengthening; and cardiovascular exercise. After 10 weeks, he reported improved tolerance to sleeping, yard work, and household tasks.

The prevalence of DISH increases between the ages of 70 and 79 years.<sup>2</sup> Further, the relationship between DISH and enthesopathy might have contributed to his impairments. Clinicians should be aware of systemic inflammatory presentations, their relationship to previous medical history or musculoskeletal complaints, and the appropriate testing. Appropriate referral and additional medical assessment assisted the identification of DISH, which enhanced management and improved this patient's function. *J Orthop Sports Phys Ther* 2020;50(4):215. doi:10.2519/jospt.2020.9243

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