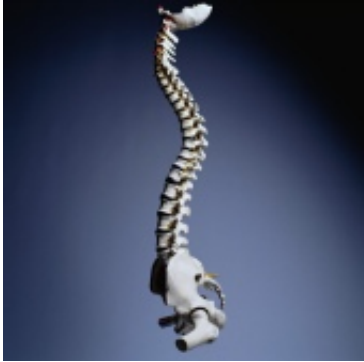


# Serotonin levels low in ankylosing spondylitis

October 3 2015

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(HealthDay)—Patients with ankylosing spondylitis (AS) have lower serotonin levels than healthy controls and patients with rheumatoid arthritis (RA), according to a study published online Sept. 30 in the *Journal of Bone and Mineral Research*.

Kalliopi Klavdianou, M.D., from Patras University Hospital in Greece, and colleagues measured [serum serotonin levels](#) in 47 patients with AS, 28 with RA, and 40 healthy subjects. The authors examined the effect of serum on serotonin signaling using the human osteoblastic cell line Saos-2, and using western immunoblots to assess levels of phospho-CREB (pCREB).

The researchers found that patients with AS had lower serum levels of serotonin than healthy controls ( $P = 0.038$ ) and patients with RA ( $P =$

0.0004). Serotonin levels were significantly lower among patients with AS receiving [tumor necrosis factor](#)  $\alpha$  (TNF $\alpha$ ) blockers compared to those not on treatment (P = 0.019). There was an inverse correlation between serum serotonin levels and pCREB induction in osteoblast-like Saos-2 cells.

"Serotonin levels are low in [patients](#) with AS and decrease even further during anti-TNF $\alpha$  treatment," the authors write. "Differences in serotonin levels are shown to have a functional impact on osteoblast-like Saos-2 cells. Therefore, serotonin may be involved in new bone formation in AS."

**More information:** [Abstract](#)  
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