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Is there a role for pre-operative iron supplementation in patients preparing for a total hip or total knee arthroplasty?

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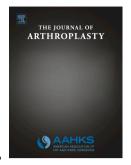
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ACCEPTED MANUSCRIPT

1 2 3	Title: Is there a role for pre-operative iron supplementation in patients preparing for a total hip or total knee arthroplasty?
4	
5	Abstract
6	
7	Background Several treatment modalities exist for the treatment of peri-operative
8	anemia. We determined the effect of oral iron supplementation on pre-operative
9	anemia, and the use of blood-conserving interventions prior to total hip (THA) and
10	total knee arthroplasty (TKA).
1	
12	Methods A total of 3,435 total joint replacements (1,461 THAs and 1,974 TKAs)
13	were analyzed during two phases of a blood-conservation program. The first phase
14	utilized erythropoietin alfa (EPO) or intravenous (IV) iron for patients at risk for
15	peri-operative anemia. The second phase included these interventions, as well as
16	pre-operative iron supplementation. The effect on pre-operative hemoglobin (Hb)
17	and serum ferritin, as well as EPO and IV iron utilization, was determined.
18	
19	Results Oral iron therapy increased pre-operative Hb by 6 g/L (p<0.001) and 7 g/L
20	(p<0.001) in the hip and knee cohorts, respectively. Serum ferritin rose by $80\ ug/L$
21	(p<0.001) and 52 ug/L (p<0.001) in the hip and knee cohorts, respectively. Patients
22	with Hb < 130g/L was significantly reduced (p<0.001 for both cohorts), as were
23	patients with serum ferritin levels <35 μ L (p=0.002 for hip and p<0.001 for knee
24	cohorts). Utilization of EPO reduced from 16 to 6% (p<0.001) and 18 to 6%

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