



## Effective Health Care

### Effect of Creatine Monohydrate on Joint Range of Motion Nomination Summary Document

#### Results of Topic Selection Process & Next Steps

- The topic, *Effect of Creatine Monohydrate on Joint Range of Motion*, is not feasible for a full systematic review due to the limited data available for a review at this time.

#### Topic Description

**Nominator(s):** Individual

**Nomination Summary:** The nominator uses creatine as a supplement. The nominator is interested in whether creatine affects joint range of motion in the context of athletic performance. The nominator notes that creatine is popular supplement.

**Staff-Generated PICO**

**Population(s):** Adults who seek to increase muscle mass and improve athletic performance or muscle function

**Intervention(s):** Creatine monohydrate

**Comparator(s):** No intervention

**Outcome(s):** Range of motion in joints, increased muscle mass; improved athletic performance; adverse effects

**Key Questions from Nominator:** Does creatine monohydrate affect joint range of movement?

#### Considerations

- Synthetic creatine, whose most common chemical composition is creatine monohydrate, is a supplement used frequently for improving exercise performance and increasing muscle mass in athletes and older adults. Creatine supplementation is relatively inexpensive and widely available to the public.
- Research suggests that creatine supplementation is safe at recommended doses, but may cause dehydration and all indications for its use recommend increased water intake with the supplement. There is some concern regarding the effects of high doses on kidney, liver, or heart function.
- A scan of the available literature did not find any relevant guidelines, systematic reviews, or other reports relevant to this topic. A search for new studies found a limited volume of studies spread across several populations and outcomes of interest, limiting the feasibility of a systematic review.