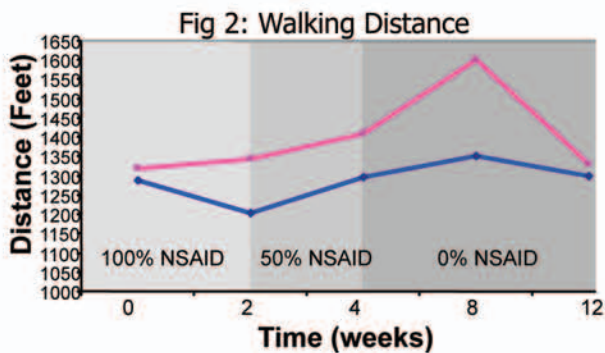
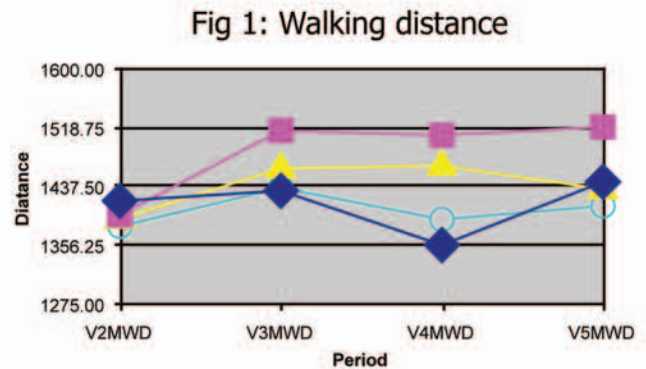


Osteoarthritis & Inflammation

Osteoarthritis is a form of arthritis, most common in the elderly, with symptoms that include joint pain and stiffness. While there is no cure for osteoarthritis, current medication aims to treat the pain and inflammation caused by this disease with pain killers and anti-inflammatory mediations including both non-steroidal anti-inflammatory drugs (NSAIDs) and cortisone.

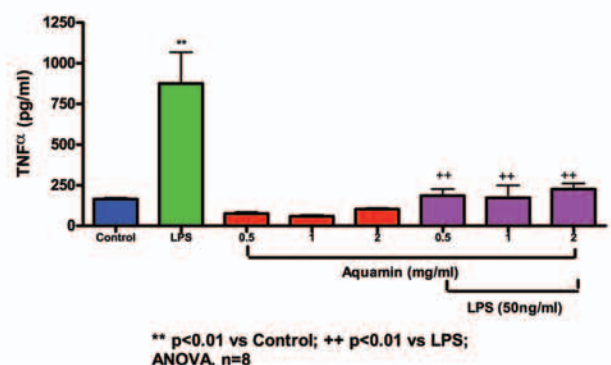
Frestedt et al., 2008¹ showed that patients with moderate to severe osteoarthritis found significant benefits from treatment with the natural marine-derived multi-mineral, Aquamin. Aquamin significantly reduced pain and stiffness and increased mobility and walking distance (Figure 1)



In a second clinical study Frestedt et al., 2009² demonstrated that Aquamin treatment resulted in decreased NSAID usage in osteoarthritis patients. These results also demonstrated significant improvements in joint mobility and in walking distances in the Aquamin group compared to the placebo following a 50% reduction in NSAID use (Figure 2)

Both of the above trials were randomised, double-blind, placebo-controlled parallel group studies over a duration of 12 weeks.

Ryan et al., carried out an in-vitro study to elucidate the mechanisms by which Aquamin may alter the molecular pathways that regulate inflammation. This work focused on cytokines, a family of molecules involved in the immune response. Deregulation of these molecules, particularly TNF α and IL-1, can lead to inappropriate inflammatory responses. Aquamin significantly inhibited secretion of both TNF α and IL-1, following inflammatory insult in-vitro (Figure 3).



¹ Frestedt et al., Nutrition Journal 2008, 7:9

² Frestedt et al., Nutrition Journal 2009, 8:7

