

# The Alternative View



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- **A new view on arthritis**

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*This issue of the TAV focuses exclusively on the developing concepts of managing osteoarthritis (OA) as an active condition rather than simply a passive wear and tear issue. For so many years OA has been put on the medical 'back-burner' because of the rather out-dated view that the joint changes and pains are purely mechanical. New work is now clearly emerging to support a more active approach in which nutrition and lifestyle look to play an important part.* <sup>MW</sup>

## Taking a fresh look at osteoarthritis

When it comes to changing our thoughts on managing osteoarthritis (OA) we first have to shift our perspective on thinking OA is simply a consequence of physical 'wear and tear'. To move forward and evolve a progressive, holistic approach we need to take on board the new concept and model for the condition that focuses around a more active disease process; one that is dynamic and responsive to subtle shifts in biochemistry as well as structural/physical balance. With over 50% of the over 60's suffering with OA related joint pains OA is the most common joint disease in the UK population and, in the light of current evidence, it should be viewed as a case of 'tear, flare and repair' rather than the more passive concept of a simple 'wear and tear' process. In the new view of OA the 'tear' component relates to overuse, misalignment and obesity factors that inevitably aggravate the inflammatory 'flare' aspect of the problem. This in turn triggers the natural 'repair' mechanisms. In some cases the natural 'repair' mechanisms may result in structurally altered but symptom free joints while in other cases the natural repair process is sub-optimal especially in those where there are ongoing 'tear' factors.

However, I think we have all heard of people with a flare up of joint pain with no apparent mechanical trigger. This is most commonly seen in the small joint of the hand where hard inflamed nodes at the finger tips (distal interphalangeal joints) spark into life for no apparent reason. In such a case, the old idea of 'wear and tear' can't fully explain the disease flare (although those with this pattern of joint disease are at an increased risk of knee, hip and generalised OA) but using the progressive model we can offer a more plausible explanation. Inflammation of the ligament attachments along joint margins (enthesal inflammation) that are responsible for the early symptoms of joint tenderness are now thought to represent the initiating factor in many cases of OA. This, in conjunction with the now accepted metabolic pathogenesis of OA forms a powerful trigger for synovitis (with thickening and related joint effusion), as well as inflammation of the sub-chondral bone and subsequent damage to the articular surface. Of the many inflammatory

cytokines linked with OA the key mediators known as interleukins (IL-1 $\beta$ ) and tumour necrosis factor (TNF- $\alpha$ ) look to play a pivotal role. With inflammation forming an important component of OA, a holistic treatment plan primarily needs to support cell membrane health. A loss of cell membrane integrity from internal (inflammatory) and/or external (mechanical stressors) can be stabilised by the use of fatty acids (marine fish body oils) and the new generation of esterified fatty acid esters (Celadrin). These safe and highly effective supplements are well tolerated by most patients but care is needed (especially in the case of fish oils) in those on concurrent anti-coagulation therapy. Intake doses for both fish oils and esterified fatty acid esters ranges are quite wide and depend on the brand used. The use of glucosamine sulphate has stood the test of time with a standard dose of 1500mg per day appearing to be the optimal level. Because of the typical age profile of OA sufferers it would be wise to use the salt-free

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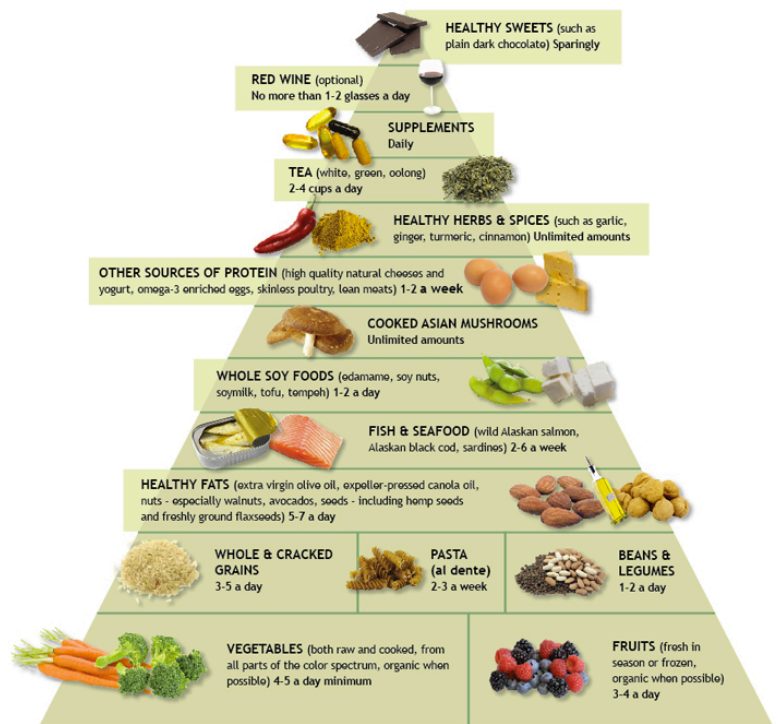
form of glucosamine sulphate to help avoid excessive sodium loading and its potential influence on blood pressure. While glucosamine sulphate exerts a very mild anti-inflammatory action some people typically respond better than others but it is wise to recommend a 3 month course before making any judgments.

When looking to other key nutritional factors and their effects on the healing process it's interesting to note that Hippocrates commented on this and famously commented "feed the patient and they'll get better" over 2000 years ago and we are only now beginning to re-appreciate the effects of nutrition on healing all over again. Nutritional research has now discovered that each of the 4 stages (vascular reaction, inflammation, proliferation and remodeling) of the healing process requires specific vitamins, minerals and amino acids for a successful outcome. Obtaining the correct balance of tissue healing nutrients may help improve the odds that the 'repair' aspect of the 'tear, flare, repair' cycle results in an optimal outcome; one that is associated with an asymptomatic, all be it structurally altered joint.

Of all the vitamins, minerals and amino acids that are available the core of evidence revolves around a few key nutrients that include vitamin C, vitamin A, zinc and the amino acids L-Arginine and L-Glutamine. Vitamin A is needed for the formation of strong and effective collagen fibers as well as a balanced immune response. Because of the potential toxicity of retinol (vitamin A), the use of the non-toxic pro-vitamin A (beta carotene) is recommended. Another important nutrient needed for the production of strong collagen is vitamin C. Collagen, the very glue that holds us together, is dependent on adequate vitamin A and C levels, a lack of either is associated with fragile and poorly healed injuries and a reduced ability to withstand mechanical stress through the articular system. During phases of inflammation and tissue damage, zinc is needed to ensure a healthy resolution. Zinc toxicity can be an issue with higher intakes. Keeping a supplement dose to around 15mg for a few months is a reasonable thing to do over a phase of inflammation (the flare phase) if your zinc needs are higher than normal.

Finally, two key amino acids appear to be essential for soft tissue regeneration and repair. L-Arginine has a surprising immune regulatory function in addition to enhancing the protein matrix essential for the formation of new body tissue where as L-glutamine is utilised by fibroblasts as a primary energy source during the healing process. (NB. All these nutrients are available in our ST-Repair supplement). Using a balanced and synergistic formula, such as ST-Repair,

to help support soft tissue repair along with a trial of esterified fatty acid esters, fish oils and glucosamine sulphate should help offer an extra dimension to the holistic management of OA especially when combined with a classic anti-inflammatory dietary plan as outlined by the American holistic MD Dr Andrew Weil (see <http://www.drweil.com/drw/ecs/pyramid/press-foodpyramid.html> for the full diet outline) TAV



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