

ARTHRITIS AND THE ROLE OF NUTRITION

Arthritis is a genetic term used for a number of disorders characterised by inflammatory and degenerative joint changes causing aches and pains to the bones, joints and muscles. These disorders range from localised conditions like osteoarthritis (OA) to those that are systemic, auto immune processes such as rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). This paper discusses both OA and RA and the potential for defence against chronic inflammation or degeneration using nutritional medicine.

OSTEOARTHRITIS (OA) - This is the most common type of arthritis. OA involves the breakdown of articular cartilage which protects and cushions the ends of bones. The cartilage becomes worn and loses its elasticity. This results in thickening of the bone, cysts may form and thus the joint space becomes narrower. In advanced cases the cartilage grows thin and bones begin to rub against each other resulting in pits, fissures and cracks. Eventually bony enlargements or spurs may form around the joints.

Causative factors include:

- Cumulative effects of years of wear and tear leading to stress of the collagen matrix;
- Hyper-mobility and repetitive overuse of a joint e.g. in ballet dancers, athletes etc.;
- Malalignment of a joint due to a previous injury or congenital deformity;
- Excess weight puts extra burden on joints, gaining 5kg may result in 10-15kg of additional stress on your knees when you climb stairs;
- Hormonal factors (as in acromegaly), mineral imbalances (e.g., hyperpara-thyroidism) all contribute to OA.

The Symptoms: Pain and stiffness in the joints particularly with movement. Swelling and deformities due to bony growths especially in the fingers are common. Involvement of the hips and spine causes great pain, swelling and instability in movement.

Conventional Treatment - The use of NSAIDs (non steroidal anti-inflammatory drugs) alleviates joint pain but does not favourably affect the outcome of the disease. Aspirin is a popular drug but the high therapeutic dose required leads to stomach irritations, ulcers, bleeding as well as hearing problems, tinnitus and kidney problems. Other NSAIDs e.g., indomethacin, ibuprofen or naprosyn can produce asthma or chronic rhinitis (other side-effects are headaches, stomach ulcers, dizziness) and are recommended for short term usage.

Furthermore NSAIDs have been implicated to inhibit collagen matrix synthesis and accelerate the destruction of cartilage. It would appear that these drugs are useful to suppress the symptoms but offer little in the way of effective treatment to halt the degeneration of cartilage or to repair the damage caused by OA.

Nutritional Treatment

If you are currently using prescription drugs, do not change the dosage or stop its use without consulting your health practitioner.

- Check for food sensitivities and support adequate digestion of anti-genetic food protein. Avoid foods known to exacerbate pain: night shades, acid ash foods such as red meat, caffeinated beverages, soft drinks.
- Aim for your healthy weight range to alleviate stress on your joints.
- Beneficial foods include: alkali foods like fruits and vegetables; cold water fish; silicon containing foods like whole grains and nuts; ginger and tumeric.
- **Glucosamine** is a natural nutrient that has been available in recent years and provides great promise for the treatment of OA. It is a key precursor and regulator of connective tissue synthesis, providing the body with an important raw material that appears to halt the disease process itself. It occurs naturally in the body and stimulates collagen production. Foods like oats, tripe, shark cartilage (fin), pig's trotters are good dietary sources of proteoglycan.
- **Antioxidant vitamins E, C, Betacarotene** provide membrane stability; together with **B6, zinc, B3** have an anabolic effect on cartilage, something we don't see in conventional medicine.
- Collagen synthesis nutrients include **proline, lysine, glycine** and cofactors **zinc, magnesium, copper**.
- For pain relief take **DL-phenylalanine, bioflavonoids, essential oil EPA, harpagophytum (devil's claw)**
- Hydrotherapy and stretching exercises will help improve mobility and flexibility. Do not overtax joints nor exercise to the point of pain.
- Massage using copper chelate cream will improve circulation; wear cushioning and support footwear at all times.

RHEUMATOID ARTHRITIS (RA).

This is an auto-immune condition that is systemic and causes widespread inflammatory changes chiefly of the synovial membranes of multiple joints in the body.

Auto-immunity means that the immune system seems to be mistaking its own tissue for a foreign invader and attacking itself.

Rheumatoid Factors (RF) are antibodies to IgG and are present in 60-80% of adults with RA. The cell-mediated, humeral and non-specific immune responses to the immune complexes lead to much of the inflammation in connective tissues seen in RA.

The systemic nature of RA means it is capable of attacking other parts of the body besides the joints.

There is potential involvement of the nervous system, the eye, skin, renal and pulmonary systems. For example neuropathy, scleritis, arteritis and rheumatoid nodules are frequent components of the disease.

Causative factors:- there is no single cause for RA. It is clear that a number of factors play a role:

Diet has been strongly implicated as a cause of and therapy for many forms of arthritis, unfortunately this aspect is often overlooked and underestimated. Often, patients are allergic to certain foods, commonly wheat, milk, salicylates, corn, beef and nightshades. Every patient should have his/her diet screened for arthritis - triggering effects. Individuals with RA have increased **bowel permeability** to dietary and bacterial antigens as well as alterations in bacterial flora. Gut permeability significantly contributes to increased levels of circulating endotoxins and immune complexes characteristic of RA. The mechanism of food allergy link abnormal gastro-intestinal (GI) function with immune attacks on connective tissue. In all patients, normal GI function should be rigorously sought by adaptive nutritional means.

Evidence for the **genetic component** in RA appears to be the presence of HLA-DW4 antibody in 70% of patients.

Viral and bacterial causes have also been implicated such as Epstein Barr virus, rubella virus, Freund's adjuvant and mycoplasma, even though no microbial agent has been consistently isolated in RA patients.

Symptoms. The peak incidence is between 20-40 years and RA can also affect children. Several joints are involved in the onset and typically in a symmetrical fashion that is, both hands, feet, wrists, ankles, knees. Onset may be gradual but for some patients may be abrupt. The amount of joint pain experienced varies. Muscle pain, morning stiffness, fatigue or a low grade fever may precede appearance of painful swollen joints. Anaemia is also present. Initially one or two joints are affected, then this spreads to many joints of the body. The condition may flare up with sudden worsening of symptoms or decrease and disappear during remission. RA may lead to Sjogren's syndrome, (dryness of the eyes or mouth). In advanced stages, joint deformities are seen.

Nutritional Treatment

RA is a multifactorial disease. The aim is to control as many of these factors as possible.

- Elimination of allergic foods has shown to be of significant benefit to some individuals with RA. Seek professional advice regarding dietary restriction.
- Most patients with RA are deficient in stomach acid and require appropriate supplementation with **digestive enzymes**.

- Arachidonic acid from animal fats contributes to inflammation through its conversion to prostaglandins and leukotrienes. **Vegetarian diets, vitamin E and C rich foods** are of benefit, as is eating **cold water fish** (or take **EPA**).
- **Vitamin E, C, zinc, manganese** work with glutathione peroxidase and superoxide dismutase and has potent antioxidant activity, something you won't get from conventional medicines.
- **Tryptophan** as the precursor to serotonin dampens the perception of pain. Tryptophan and **DL-Phenylalanine** both relieve chronic pain by increasing endorphin levels in the body.
- **Cysteine** and **methionine** are sulphur containing amino acids and are important in cartilage structures. Garlic and onions are good dietary sources.
- **Bioflavonoids** such as **quercetin** and **rutin** and have shown to be beneficial in RA by inhibiting the release of histamine and the production of leukotrienes and by improving the integrity of connective tissue structures. Flavonoids appear to be synergistic with pancreatic enzymes like trypsin to give anti-inflammatory activity.
- **Tanacetum parthenium (feverfew)** inhibits inflammation and decreases the secretion of inflammatory chemicals from platelets and white blood cells. **Harpagophytum (devil's claw)** and **Scutellaria baicalensis (Chinese skullcap)** have analgesic and anti-inflammatory properties.

References:

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The information in this leaflet is not presented as a substitute for professional treatment. Please consult your health practitioner for specific individual health needs.