

Put An End To Painful Inflammation With Boswellia

Inflammation is a painful reaction of your immune system and Boswellia may help to relieve this pain by reducing the inflammation. This is a story of how Boswellia can be used to relieve pain, and is in three parts: the cause of the pain, the components of the tree and how these components work to relieve the pain.

It is a classic tale of how ancient remedies have been explained by modern science.

First, the Pain.

Inflammation occurs because of the reaction of your immune system to what it perceives as being the presence in your tissues of dangerous foreign particles. Your immune system generally reacts to particles. Typical particles are bacteria and viruses, pollen, smoke, your own body cells that are not doing what they should, moulds and fungi, and various other things that can circulate in your blood.

There are several reasons for the immune system being activated, some of them historical due to your body having an imprinted memory of previous bacteria and viruses that it has dealt with, and others the reaction to new invaders that it has never met before, and for which your immune system creates antibodies to destroy. Another is the recognition of abnormal body cells that have to be destroyed before they can proliferate, and yet another is when the immune system gets confused and itself damages your own tissues such as in rheumatoid arthritis.

Whatever the cause, inflammation is a common result of the immune system going to work, and can be extremely painful. It can cause damage to our own joints, vascular system and major organs, although treatment of the inflammation does not reduce the effectiveness of the immune response. You can safely treat the inflammation with anti-inflammatories and painkillers without the condition getting worse.

Common physical manifestations of inflammation are the swollen and painful joints of rheumatoid arthritis (osteoarthritis is not an immune response), the swelling in the airway of asthma, the spots and swellings of measles and chickenpox, the lesions of psoriasis and the swelling and pain of abrasions and cuts that have gone 'septic' or 'poisoned'. The latter two are simply examples of the effect of phagocytes and leucocytes on bacterial infection – the white blood cells and their cohorts!

The reason that inflammation causes pain is that it affects nerve endings, and causes pressure against the damaged tissues that initiated the immune response. Although regular painkillers can control the pain of inflammation to an extent, they are generally not the ideal treatment. Herbal treatments are not necessarily always the ideal treatments either, but boswellia is one herb that has been proved to be effective in reducing the pain of inflammation.

Secondly, the Herb.

Boswellia is a tree that has a number of different species that have been used in Ayurvedic medicine. This is a form of Indian medicine that is used today by millions in India, and also in the neighboring Nepal and Sri Lanka. Its approximate translation is 'Meaning of Life', or could even be subtended to 'Science of Life', and is more a system of health care than the treatment of specific conditions.

There are four species of Boswellia: *Boswellia carteri*, *Boswellia frereana*, *Boswellia sacra* and *Boswellia serrata*, and it is *B.serrata* that is predominantly used in Ayurvedic medicine to treat a number of conditions, including ulcers, rheumatoid arthritis, dysentery and asthma. It is not coincidence that most of these are inflammatory conditions, and even dysentery is a form of inflammatory colitis.

You might be more familiar with Boswellia by the fragrant resin that it produces: Frankincense. There are different grades of Frankincense according to the species and grade of Boswellia, and if you are using the resin for its aroma then that could be an important consideration. However, the active ingredient of Boswellia are the so called boswellic acids that are contained within the resin.

It has been used in the treatment of a number of inflammatory conditions including asthma. Many do not realize that asthma is an inflammatory response of the immune system to particulate irritants in the airway such as cigarette smoke and other small particles. In this case the inflammation is caused by the histamine that is released by mast cells sent to the area of irritation by the immune system.

Third- The Science

Frankincense has traditionally been used in Ayurvedic medicine for centuries, and is even mentioned in the Bible. The trunk exudes a resin containing

mono- and sesquiterpenes that possess powerful anti-inflammatory properties. They are also well known antiseptics and astringents, and support the immune and respiratory systems.

These terpenes are commonly referred to as boswellian acids, and consist of a carboxylated pentacyclic triterpene with at least one more functional group. Both the alpha and beta acid have a hydroxyl (-OH) grouping, and there are also the acetyl (CH₃CO-) equivalents with an acetyl group replacing the OH. There are other so-called-boswellian acids, and it is believed that they all play a part in the anti-inflammatory properties of the resin.

The acetyl derivatives are thought to be involved in the death of some cancer cells, particularly those involve in brain and colon tumors, and also leukemia. The way in which they achieve this appears to be a programmed progression that ends with the dying out of the cells rather than a violently destructive mechanism, which lends credence to the Ayurvedic belief that the treatment is a natural one designed by nature.

The anti-inflammatory properties of the acetyl triterpenes are due to their effect on leukotrienes that sustain the inflammatory reactions of many allergic reactions and also of asthma. They appear to inhibit the enzyme elastase in leukocytes; this is a crucial enzyme in the production of the chemicals that promote inflammation.

It has been established that the inflammatory response of the immune system is due to the action of specific enzymes, so it stands to reason that if you can inhibit these enzymes, then you will also inhibit the immune response to specific initiators and so reduce the pain involved. Bosellian acid in the form of triterpenes appears to contain these inhibitors, and this would appear to explain its effectiveness. Pinene and phellandrene are among the terpenes isolated from Boswellia.

A standardised dose of 60% - 65% of Bosellian acids is generally used, so if you are purchasing Boswellia this is what you should be looking for. Keep in mind that it is intended to treat inflammation, and that inflammation is an indicator that something with your body is not quite right. Therefore, while inflammation is painful, and Boswellia may help, you should also treat the cause of the inflammation by treating the immune system.

About the Author

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