

## Etanercept Helps Those Suffering From Rheumatoid Arthritis

Massachusetts General Hospital



Rheumatoid arthritis is a debilitating illness that affects nearly two million people in the U.S. alone, mostly women. While its cause is unknown, rheumatoid arthritis causes chronic joint inflammation and potentially can lead to joint destruction, and functional disability.

Rheumatoid arthritis is an autoimmune disease, which means that the body's immune system mistakenly attacks its own tissues — in this case, joints and surrounding body parts, including cartilage, bone and sometimes nearby organs.

Research at Massachusetts General Hospital, an affiliate of the Harvard Medical School in Boston, utilizing a special bio-engineering technique developed separately at Columbia University in New York City, led to the development of a medication called Etanercept, used to treat rheumatoid arthritis patients. Etanercept is a protein that reduces the amount of tumor necrosis factor (TNF), which is prevalent at abnormally high levels in those suffering from rheumatoid arthritis.

“ *TNF is a substance produced by the body’s immune system, and too much of it can overwhelm the immune system’s ability to control inflammation in the joints. Etanercept deactivates TNF before it leads to inflammation.* ”

TNF also is found in excessively high levels in those with other autoimmune diseases, such as ankylosing spondylitis (chronic inflammation of the spine), psoriatic arthritis (an arthritic condition linked to psoriasis) and psoriasis. For this reason, Etanercept also has been used to treat people with these diseases; patients have reported significant, long-lasting relief, often in a matter of weeks.

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