



Here is a close up view of the nail lodged in the foot. There is a lot happening and it is all about repair. Blood vessels may be damaged and small nerve endings stretched. Small cells, which normally just hang around waiting for trouble, release histamine, which makes blood vessels release plasma, which in turn causes more swelling. This process releases white blood cells and delivers cells that mop up the mess in the area and, if the skin has been broken, deal harshly with any bacteria present. These cells are called phagocytes and macrophages. Clotting factors and cells that create scar tissue are also activated. Damaged nerves may also release chemicals, see page 64, that aid the process. This swelling is called **inflammatory soup**. Inflammatory soup directly activates alarm bells and this increased sensitivity is designed to protect the injured tissue.

Inflammation makes joints stiff in the morning, produces sharp pains, redness and warmth. Often, anti-inflammatory drugs such as ibuprofen, naproxen, aspirin and paracetamol reduce the effects including the pain. Anti-inflammatories probably work by stopping the production of prostaglandins⁴⁴, which are key sensitising chemicals in inflammation. The swelling, which is the most obvious part of inflammation and which worries so many people, is just a by-product of the need to get blood and healing chemicals into the area.

Note that we are talking mainly about acute inflammation. Chronic inflammation is a part of certain disease states such as rheumatoid arthritis and can have different and extra effects.