

Study reveals new form of inflammation

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(Medical Xpress) -- University of Edinburgh scientists have discovered a previously unknown way in which white blood cells cope with injury and infection.

The study, published in *Science*, challenges current scientific thinking on [inflammation](#) and healing.

It was previously assumed that when [tissue](#) becomes injured or infected, white blood cells enter the tissue via the [bloodstream](#) to repair and protect it from further damage.

This process causes the area to become inflamed.

The new findings show that the cells are capable of carrying out a triage process locally.

They do this by rapidly dividing within the tissues to form a protective layer, without relying on white [blood cells](#) from the [blood stream](#).

The findings will improve researchers' understanding of how the body fights infection and injury.

Scientists say it could also improve understanding of how this system can go wrong and cause allergies, help tumours to grow and cause scarring.

[White blood cells](#) work by flooding the infected area and eating up bacteria to fight infection, as well as engulfing debris caused by tissue

damage.

This process is one of the main weapons in the body's arsenal against attacks from foreign bodies.

However, cells that come in from the blood often cause collateral damage when trying to kill infection.

Although this newly discovered form of local inflammation is less likely to cause collateral damage, the researchers have found that it is directly linked to the same processes that cause allergy and scarring.

"The discovery opens up new opportunities to develop drugs that benefit patients on several fronts - either to stimulate this new form of inflammation to help the body recover from infection or injury, or to minimise it to prevent allergic reactions or scarring." said Professor Judith Allen, Centre for Immunity, Infection and Evolution.

Provided by University of Edinburgh

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