

# Bone fix for pet dog could save the limbs of soldiers

By Sarah Knapton SCIENCE EDITOR

A GROUNDBREAKING bone-mending technique could save soldiers and landmine victims from amputation after it was trialled successfully on a dog.

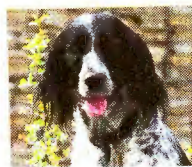
Vets and scientists repaired the leg of a two-year-old Münsterländer named Eva, who suffered a serious fracture of its right foreleg after being hit by a car.

Despite efforts of specialists, the difficult 0.7 inch (2cm) wide break would not heal and Eva was left facing the prospect of life on three legs. Fortu-

nately for the dog it was taken to the University of Glasgow's Small Animal Hospital where vet William Marshall had heard about an experimental new treatment that colleagues were working on to help landmine and bomb victims.

A special putty made of bone flakes and a bone-growth protein was packed into the wound and within just seven weeks the fracture had completely healed.

"We are absolutely thrilled with Eva's recovery," said owner Fiona Kirk-



Eva, a two-year-old dog with a badly broken leg, was the first patient to have the pioneering treatment

land, of Glasgow. "When we heard about an experimental treatment that might help her, we had no idea it was connected to such an important project. It is amazing to think that the

treatment used to heal Eva's leg will help researchers one day repair the bones of landmine blast survivors.

"I'm very grateful to everyone at the University of Glasgow."

A research project led by Prof Manuel Salmeron-Sanchez and Prof Matt Dalby began work in January with the aim of developing synthetically grown bone tissue for use by trauma surgeons when treating blast survivors.

They discovered that a special protein called BMP-2 helped bones to grow and that a chemical called poly-

ethyl acrylate (PEA) helped hold the protein in place in a wound.

Trials on patients were not expected to start for several years.

However, as Eva's situation was desperate, Mr Marshall used a mixture of PEA and BMP-2 to treat her fracture.

"We are delighted with the results, and are looking forward to developing the use of PEA and BMP-2 further in veterinary medicine," said Mr Marshall, a clinician in orthopaedic surgery.

The technology has the potential to

be used for anyone who needs new bone tissue.

Around 50 injured soldiers a year have to have their limbs amputated. The £2.7million research project was funded by Sir Bobby Charlton's landmine charity Find A Better Way.

Sir Bobby said: "When I signed the funding agreement for this project just six months ago I was not expecting there to be any results from this technology for years. Eva is a beautiful dog and I'm delighted she will now have a normal life."