

## HISTORICAL ORTHOPAEDIC ARTEFACTS FACT SHEET No 1

### The Thomas Splint



The Thomas Splint was first described by Liverpool surgeon and bone-setter Hugh Owen Thomas in 1875 in his book "Diseases of the Hip, Knee and Ankle".

It was originally designed to provide immobilisation to treat both tuberculous joints and fractures of the femur by mechanical and physiologic rest.

It was introduced by Robert Jones during World War One for the acute management of femoral fractures where it was responsible for a 60 per cent reduction in mortality, due to the splint's effect on open femoral fractures.

It replaced the older Liston and Hodgen splints which were still being used by the Royal Army Medical Corps (RAMC) in 1914.

During World War Two, the Thomas splint found another life in the North African campaign. The jolting and jarring of the damaged limb over long distances was agonising. The answer was the 'Tobruk' splint, named after the 1941 battle of Tobruk. The limb was placed in traction in the Thomas splint as normal and then the splint and limb were wrapped in Plaster of Paris. This achieved excellent immobilisation and allowed the casualties to be transported more comfortably.

A report from the RAMC on the first ten days of the 2003 Gulf conflict found the Thomas splint to be an essential tool, particularly in the management of ballistic injuries.

Some surgeons at Camp Bastion in Afghanistan found that the shift in military practice to the use of external fixators for fracture stabilisation was not as successful as first hoped. This resulted in some return to the use of plaster combined with other methods, even including the 'old fashioned' Thomas splint.

A modern version is shown above.

#### Sources

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2. Powell, M. Orthopaedic nursing. 6<sup>th</sup> ed. Livingstone, 1968, p 74
3. Roaf, R & Hodkinson, LJ. The Oswestry textbook for orthopaedic nurses. Pitman, 1963, p 186
4. Robinson, PM & O'Meara, MJ. The Thomas Splint: its origins and use in trauma. Bone & Joint Journal vol 91B 2009, p 540-544