



# ACCIDENT INFORMATION



## First aid for injuries caused by high pressure jets

An underestimated injury caused by a high pressure jet may lead to amputation of the injured body part. The injury may seem like a barely visible opening in the skin. **Do not underestimate the danger of this injury.**

Each person that has been subjected to an injury from high pressure jets is strongly recommended to immediately seek medical attention.

## MEASURES AT THE ACCIDENT SCENE

Calm the injured person! Check consciousness and breathing! Chill and support the injured body part as much as possible, keep it still and, rest it high as possible. Regarding eye injuries: do not apply pressure to the eyes!

### Transport

If the injured person is fully **conscious**:  
Supine position, rest the injured body part as high as possible.

If the injured person is **unconscious**:  
**Semi-prone position**, rest the injured body part as high as possible.

## MEASURES AT THE HOSPITAL

Bring the following information to your hospital

### Information to the hospital staff

In waterjet cutting, water under extremely high pressure (up to 400 MPa) is used. A water jet beam which hits the body surface immediately penetrates the skin. This can happen even if protection equipment is used. An immediate spreading of water happens subcutaneously along the bundle. Corticalis (the surface) of the underlying skeleton parts can also be penetrated which can cause water to be pressed into the center of the bone. The hands are the most common localisation of injury. If the water used is contaminated by bacteria a spreading of bacteria's in the total area of the wound may be a result.

Initially the symptoms appear relatively minor with a minimal wound and a slight swelling in the surrounding soft parts. Depending on the content of bacteria in the water and their virulence an infection can start in the tissue. In a worst case scenario it is very strong and begins in a few hours. Severe pronounced damage of the tissue can follow. The recommended treatment at manifested infection is immediate surgery in the form of splitting up. Also if the symptoms are minor at the first examination it is recommended that the damage is followed up because of the risk of infection. Prophylaxis of antibiotics should be considered.

Ref: Weltmer JB, Pack LP. High pressure water-gun injection injuries to the extremities, J. Bone Joint Surg., 70:1223, 1988.

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