What to do in case of projection of hydrofluoric acid?

1. **Call immediately 115** and specify to the operator:
   
   A) Where the victim is located  
   B) That it is a hydrofluoric acid (or HF) projection (very important for proper care with adapted resources)  
   C) How many people are concerned  
   D) Your name as contact person as well as your phone number  

2. Only allow the first aid team to access the contaminated zone (to avoid propagating the contamination)

3. If you can provide help to the person, protect yourself with adapted personal protective equipment (lab coat, gloves, goggles, …)

4. Be very cautious not to propagate the contamination when you are moving the victim to washing places (sink, eye-shower, shower, …)

5. Minimise movements, go to the closest washing place

6. Pay attention to projections when proceeding to the washing

7. Rinse the victim with water whilst waiting for the first aid team

**The emergency intervention group will arrive in the shortest deadline with the antidote. This procedure is applicable for all kind of acidic projections.**

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Hydrofluoric acid (HF) is a solution of hydrogen fluoride in water. This colorless solution is an inorganic highly corrosive acid (pKa= 3.2) capable of dissolving many materials including glass. It is also very toxic whatever its concentration. Thus, according to the new GHS regulation, the following pictograms characterize the hazards of hydrofluoric acid:

- \[\text{Hazard symbol for Corrosive Agents} \]
- \[\text{Hazard symbol for Very Toxic Substance} \]

Depending on the situation and the solid or gaseous state of the acid, its absorption by the human body will occur through skin, eyes, respiratory and digestive tracts. It will easily go through the skin layers, easily and effectively bind to cellular and extra-cellular magnesium and calcium. This can weaken bones and teeth, cause cardiac arrhythmia, neurological disorders and lung oedema.

Hence, even if a projection is suspected, one has to act rapidly by calling 115 (see DSPS information below). Indeed, the symptoms can appear even after several hours the incident has occurred:

- **Hence at the EPFL this acid cannot be used freely but an authorization has to be obtained from the Occupational Safety and Health service ([http://sb-sst.epfl.ch/chemical-hazards](http://sb-sst.epfl.ch/chemical-hazards)).**

This document reminds the hazards and toxicity of hydrofluoric acid, and gives advises regarding the work procedure. Amongst other information it will also indicate the gloves required to work with this acid.