



# MITIGATING THE DANGERS OF MERCURY

Photo by Tommy Trenchard/IDRC

August 2022

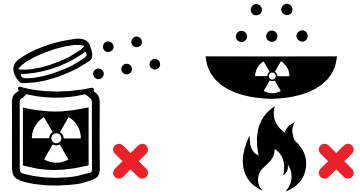
**IMPACT**  
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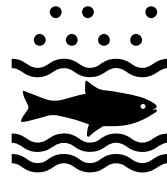
# DANGERS OF MERCURY USE:

The final stage of gold recovery often uses mercury, but mercury is very poisonous. Fumes from mercury are dangerous, but you can't see them or smell them.

You can be exposed to mercury from the fumes. The fumes are dangerous when mercury is being heated, but also at normal temperatures, mercury gives off a vapour when it is being handled or if a container is not closed properly.

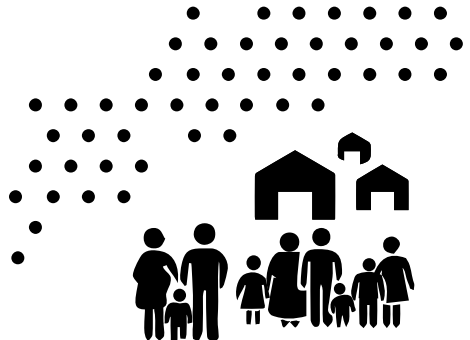


This mercury vapour can remain in the air, get deposited on clothes, carried in the wind to your homes and also into water where it can end up in fish.



You can also be exposed to mercury when you touch it, from eating contaminated food, or when mercury in tailings is mixed with cyanide which produces toxic compounds.

Mercury spreads through the body and can affect the lungs, skin, kidneys, and brain. The effects of being exposed to mercury include difficulty breathing, difficulty walking, blurred vision, tremors, infertility, and impotence. These effects may not be immediate, they can take years to appear and can be irreversible.



Mercury is also very dangerous for pregnant women, affecting a child even before it is born.

# HANDLING MERCURY SAFELY



Never use mercury near children or if pregnant.



Store the mercury in a bottle or jar with a tight-fitting lid.



Always use personal protective equipment including gloves, goggles, and a specially designed mask.



Always work in a dedicated area, known as an amalgamation area, where there are amalgamation ponds and disposal areas so the mercury does not contaminate water sources.



Avoid openly burning mercury, which is considered extremely harmful.



If you are burning mercury, always wear a mask and use a retort to capture the fumes.

## USING A RETORT:



A retort is a simple device used to capture the invisible mercury vapours and turn them back into liquid mercury, which can then be reused.

Place the retort where it is going to be used. This should be outdoors, away and downwind from people and buildings.

Place the retort above a heat source.

If you are using a type of retort that collects mercury into a water bowl, place the end of the retort pipe under water.

Heat the amalgam until all of the mercury is evaporated. The time varies depending on heat and amount of amalgam.

Wait for the retort to cool.

**Do not open the retort while it is still hot.** If you do, mercury vapours will escape and contaminate you.

Store the retort and work clothes safely - away from people and houses.

## ELIMINATE MERCURY:



International conventions and some national laws prohibit the use of mercury when possible.

If you would like to eliminate mercury from your processing you can look at options like gravity concentration, flotation, and leaching the gold with chemicals.

In the meantime, always protect yourself and others.