

# Overview of Health hazards

## Industries in Upper Awash Basin

Type of industry	Contaminants	Potential health effects from long-term exposure
Pharmaceutical	Thallium	Hair loss, changes in blood, kidney, intestine or liver problems
	Acids, bases, cyanides, and metals	Nerve damage and thyroid problems
Leather and Tannery	Acetone	Acute exposure: Eye and respiratory irritation, mood swings, and nausea Long-term exposure: respiratory tract irritation, dizziness, and loss of strength
	Butadiene	Genotoxic, mutagenic and carcinogenic
	Chromium	Skin rashes, upset stomachs and ulcers, respiratory problems, weakened immune systems, kidney and liver damage and risk of cancer (depending on oxidation state)
	Sulphur	Neurological effects and behavioural changes; disturbance of blood circulation; heart damage; effects on eyes and eyesight; reproductive failure; damage to immune systems; stomach and gastrointestinal disorder; damage to liver and kidney functions; disturbance of the hormonal metabolism; dermatological effects
	Nitrobenzene	Low concentrations: fatigue, weakness, dyspnea, headache, and dizziness. Higher concentrations: depressed respiration, bluish-gray skin, disturbed vision, and coma.
	Pentachlorophenol	Problems with liver or kidneys and may have an increased risk of getting cancer
	Phenol	Necrosis of skin and mucous membranes, abdominal pain, nausea, vomiting, sweating, diarrhoea and cyanosis
	Sodium Bisulfite	Irritation of eyes, skin, mucous membrane, cancer hazard
	Sodium Fluoride	Affects thyroid function and can cause dental and skeletal fluorosis and bone damage. It may cause bone cancer (osteosarcoma)
	Trichlorobenzene	Irritation and dermatitis, changes in adrenal glands
Textile	Chromium	Skin rashes, upset stomachs and ulcers, respiratory problems, weakened immune systems, kidney and liver damage and risk of cancer (depending on oxidation state)
	Trichlorobenzene	Irritation and dermatitis, changes in adrenal glands
	Formaldehyde	Genotoxic, mutagenic and carcinogenic
	Hydrogen peroxide	Genotoxic, mutagenic and carcinogenic in high doses. Small doses can cause irritation of eyes, skin, and the inside of mouth, stomach, and intestine.
Steel and metal	Phenol	Mouth and throat, necrosis of skin and mucous membranes, abdominal pain, nausea, vomiting, sweating, diarrhoea and cyanosis
	Barium	Increase in blood pressure
	Beryllium	Intestinal lesions
	Cadmium	Kidney damage

Source: United States Environmental Protection Agency  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

Type of industry	Contaminants	Potential health effects from long-term exposure
Steel and metal (continued)	Chromium	Skin rashes, upset stomachs and ulcers, respiratory problems, weakened immune systems, kidney and liver damage and risk of cancer (depending on oxidation state)
	Cyanide	Nerve damage and thyroid problems
	Hexachlorobenzene	Liver /kidney problems, reproductive difficulties, increased risk of cancer
	Selenium	Hair or fingernail loss, numbness in fingers or toes, circulatory problems
Horticulture and floriculture	Nitrates, nitrites	Methemoglobinemia or blue baby syndrome. Can result in brain damage and death. Young animals are affected by nitrates the same way as human babies.
	Aldrin	Carcinogenic and eye skin and respiration irritant
	Alachlor (herbicides)	Eye, liver, kidney problems, anemia and increased risk of cancer
	Arsenic	Skin damage, problems with circulatory systems. May increase risk of cancer
	Atrazine	Cardiovascular system of reproductive problems
	2,4 - D	Kidney, liver, or adrenal gland problems
	Dalapon	Minor kidney changes
	Dicofol	Liver and kidney damage
	Dinoseb	Reproductive difficulties
	Diquat	Cataracts
	Endothall	Stomach and intestinal problems
	Endrin	Liver problems
	Glyphosate	Kidney problems, reproductive difficulties
	Lindane	Liver or kidney problems
	Methoxychlor	Reproductive difficulties
	Oxamyl	Slight nervous system effects
	Picloram	Liver problems
Simazine	Problems with blood	
Chemical industries (Plastic, foam, soap, detergent and tyre industries among others)	Carbon tetrachloride	Liver problems and increased risk of cancer
	Chlorobenzene	Liver or kidney problems
	Cyanide	Nerve damage and thyroid problems
	o-Dichlorobenzene	Liver, kidney, or circulatory system problems
	p-Dichlorobenzene	Anemia; liver, kidney or spleen damage
	1,2-Dichloroethane	Increased risk of cancer
	Dichloroethylene (various)	Liver problems
	Dichloromethane	Liver problems; increased risk of cancer
	1,2-Dichloropropane	Increased risk of cancer
	Di(2-ethylhexyl) adipate	Weight loss, liver problems, or possible reproductive difficulties
	Di(2-ethylhexyl) phthalate	Reproductive difficulties; liver problems; increased risk of cancer
	Dioxin	Reproductive difficulties, increased risk of cancer
	Epichlorohydrin	Increased cancer risk, stomach problems
	Hexachlorocyclopentadiene	Kidney or stomach problems
	Styrene	Liver, kidney, or circulatory system problems
	Tetrachloroethylene	Liver problems, increased risk of cancer
	1,1,2 - Trichloroethane	Liver, kidney, or immune system problems
	Vinyl chloride	Increased risk of cancer
	Xylenes	Nervous system damage
	Zinc dioxide	Respiratory tract irritation, dizziness, and loss of strength.