

Health Effects from Biological Contaminants of Gang Canal in Ganganagar District

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ABSTRACT

Biological contaminants are living organisms that can cause harm to human health. They can be found in water, air, soil, and food. Canals are often contaminated with biological contaminants, such as bacteria, viruses, and parasites.

Biological contaminants are living organisms that can cause harm to humans, animals, or the environment. They can be found in a variety of places, including food, water, soil, and air. Biological contaminants can be caused by a variety of factors, including human activities, natural disasters, and industrial processes.

Bacteria are single-celled organisms that can cause a variety of diseases, including food poisoning, pneumonia, and meningitis. Viruses are even smaller than bacteria and can cause a variety of diseases, including the common cold, influenza, and HIV/AIDS. Parasites are organisms that live on or inside other organisms and can cause a variety of diseases, including tapeworms, roundworms, and malaria. Fungi are multicellular organisms that can cause a variety of diseases, including athlete's foot, ringworm, and yeast infections. Molds are fungi that grow in moist environments and can produce toxins that can cause respiratory problems.

KEYWORDS: Health, Biological, Contaminants, Canal

INTRODUCTION

Biological contaminants can also damage property and the environment. For example, mold can cause structural damage to buildings and release toxins that can pollute the air and water.

If you think you have been exposed to a biological contaminant, it is important to see a doctor immediately. Early treatment can help prevent serious health problems.

Biological contaminants are living organisms or their parts that can make water unsafe to drink, swim in, or use for other purposes. They can come from a variety of sources, including sewage, agricultural runoff, and industrial waste.

Biological contaminants can cause a variety of health problems, including diarrhea, vomiting, and respiratory infections. In some cases, they can even be fatal. They can also harm fish and other aquatic life, and can make water unsafe for recreational activities.

There are a number of things that can be done to reduce the risk of biological contamination, including:

- Treating sewage before it is released into the environment
- Using fertilizers and pesticides carefully to avoid runoff
- Ensuring that industrial waste is properly disposed of
- Testing water for biological contaminants on a regular basis

By taking these steps, we can help to protect our water supply from biological contamination and keep it safe for everyone to use.

Here are some specific examples of the impact of biological contaminants on water:

- **Sewage:** Sewage is a major source of biological contaminants. When sewage is not properly treated, it can contain a variety of harmful bacteria, viruses, and parasites. These organisms can cause a variety of health problems, including diarrhea, vomiting, and respiratory infections. In some cases, they can even be fatal.
- **Agricultural runoff:** Agricultural runoff is another major source of biological contaminants. When rain or irrigation water washes over agricultural fields, it can pick up fertilizers, pesticides, and other chemicals. These chemicals can contaminate water supplies and harm fish and other aquatic life.
- **Industrial waste:** Industrial waste can also contain a variety of biological contaminants. These contaminants can come from a variety of sources, including manufacturing processes, mining,

and oil and gas production. When industrial waste is not properly disposed of, it can contaminate water supplies and harm human health and the environment.

The impact of biological contaminants on water can be significant. By taking steps to reduce the risk of biological contamination, we can help to protect our water supply and keep it safe for everyone to use.

Here are some additional information about biological contaminants:

- Biological contaminants can be spread through a variety of ways, including contact with contaminated surfaces, ingestion of contaminated food or water, and inhalation of contaminated air.
- The severity of the health problems caused by biological contaminants can vary depending on the type of contaminant, the route of exposure, and the individual's immune system.
- There are a number of methods that can be used to control biological contaminants, including physical removal, chemical disinfection, and heat treatment.

HEALTH EFFECTS FROM BIOLOGICAL CONTAMINANTS OF GANG CANAL

A canal is depicted as a giant spurious stream of water that meanders in its supervised area. Canals and streams directly deliver water that falls in low-lying areas. Running water weakens and erodes more rapidly than standing water, but many streams, streams and canals originally started on one side of the world and then carried silt to the other.

A central support for this is that the three major sources of pollution (industry, construction and surrounding) are concentrated along streams of flowing water. Unions and metropolitan unions have generally been coordinated with streams because streams provide transportation and have generally been a useful place to carry waste. Agricultural activities are generally confined to adjacent streams, as stream flood plains are specially arranged in view of the various enrichments that are disposed of in the soil when the stream bursts.

Water provides a remarkable medium for various physical, chemical and biochemical reactions. Any subsequent change in the range of water quality may adversely affect the well-specific response as well as the climate as a whole. So there is a rapid improvement in hydrology for this effort. Much has been done of the impact of water quality on human beings. After that a lot pays off in the evaluation of the water thought of a brand name water bodies. The quality of water is obviously affected by the topography of that particular district and the quality of water shows its effect on the general planning of that area. Thus, when we are focusing on the investigation of that particular area, we really need to know the water quality end which gives different understanding about the climate and opinion of the people in that district .

Get Together Canal is a help of Rajasthan which brings drinking and water system water to Rajasthan from Harike shoot in Punjab, it supplies water to 15 regions of Rajasthan. Since the state-of-the-art units and metropolitan experts of Punjab are sending the waste water to the Ganges Feeder Canal passing through the Punjab region. As a result, the canal water has become dangerous for human beings and is causing water borne diseases in the state of Rajasthan.

The model was fully explored by the standard methods of reasoning given by the APHA. The test was pre-treated by the following finenesses for the evaluation of trace metals. 20 ml tests with cones were developed. HNO₃ and increased for 10 minutes, and withdrawn after some time until a sensible plan was found. The filtrate was safe and made up to a volume of 10 ml. Meanwhile, an undeniable game plan involving deionized water and thought nitric loss was other than foam and used as a reasonable model. This indisputable model with perturbations due to reagents and environment is the game-plan. The heavy metals in the models were precipitated from some area near the atomic osmosis spectrophotometer (PerkinElmer 5000 model). All radiator imbibitions were made with a micropipette. There is no framework block as all models are treated and focused by the aforementioned process. During model evaluation, the atomic absorption spectrophotometer used appropriate zero cathode illumination and the signals were evaluated for each metal to obtain the concentration at their characteristic frequencies.

The giant metals are standard regions of the planet's mantle. They cannot be weakened or destroyed. To some extent they enter our body through food, drinking water and air. As minor parts, some basic metals are fundamental to be aware of in healing the human body. Anyway, at higher centers they can provoke to hurt. Heavy metals are dangerous because of the way they bioaccumulate. Excessive metals can enter water supplies from stream and consumer waste, or even from acid storms leaching the soil and carrying significant metals into streams, lakes, streams and groundwater.

The proportion of lead was found to be 198-185 $\mu\text{g/l}$. Individuals receptive to leadership can achieve a lasting normative effect on the basis of goodness and straightness all around. Fragments have a wide range of different effects, to which young individuals and infants are more susceptible than adults. Elevated levels of directness can cause heartbreaking biochemical effects in individuals causing problems with hemoglobin mixing, effects on the kidneys, gastrointestinal aggregation, joint and regenerative development, and unusual or surprising damage to vital structure.

The concentration of chromium was found to be 177-160 $\mu\text{g/l}$. It is used in metal blends and pigments for paints, concrete, paper, adaptors, and various materials. Low levels of directness can irritate the skin and cause ulcers. Prolonged receptivity can unnecessarily damage the kidneys and liver, causing persistent damage to circulatory and nervous tissue. Chromium is a significant portion of what accumulates in ocean life over time, adding to the condition of eating fish that may be exposed to increased levels of chromium.

The social incidence of nickel was found to be 99-91 $\mu\text{g/l}$. Small amounts of nickel are normal for the human body to carry red blood cells, however, in unbalanced concentrations, can actually be risky. Excessive exposure to nickel is not known to cause any clinical problems, but severe length wasting can cause decreased body weight, heart and liver damage, and skin discoloration.

The concentration of copper was found to be 89-88 $\mu\text{g/l}$. Copper is a substance central to human life, but in high concentrations it can cause deficiency, liver and kidney damage, and stomach upset. People with Wilson's disease are more prone to the flourishing effects from overexposure to copper. Copper is in drinking water from copper pipes for the most part, as well as from additional substances needed to control the algae turn of events.

The social concentration of arsenic was found to be 75-70 $\mu\text{g/l}$. Arsenic is probably the worst part that can be found. Despite their unsafe effects, inorganic arsenic bonds are commonly found on Earth in restricted aggregates. Individuals can be exposed to arsenic through food, water and air. Erectile dysfunction can likewise occur through skin contact with soil or water that contains arsenic. Exposure to inorganic arsenic can cause various enriching effects, for example, abdominal distension and assimilation package, reduced formation of red and white platelets, changes in the skin and lungs combination. A very high response to inorganic arsenic can be caused by unuseful and badly designed transport with women, and it can cause skin irritating effects, decline in protection against diseases, cardiovascular irritating effects And the frontal cortex can suffer a significant number of injuries. Finally, inorganic arsenic can damage DNA.

DISCUSSION

These contaminants can cause a variety of health problems, including:

- Infection: Biological contaminants can enter the body through the eyes, nose, mouth, or skin. Once inside the body, they can cause infection. Symptoms of infection can include fever, chills, headache, muscle aches, and fatigue. In some cases, infection can lead to serious health problems, such as pneumonia, meningitis, and sepsis.
- Allergy: Some people are allergic to biological contaminants. When these people come into contact with the contaminants, they can experience allergic reactions. Symptoms of an allergic reaction can include rash, hives, itching, swelling, and difficulty breathing.

- Toxicity: Some biological contaminants are toxic to humans. When these contaminants are ingested or inhaled, they can cause a variety of health problems, including nausea, vomiting, diarrhea, headache, dizziness, and seizures. In some cases, toxicity can lead to death.

The severity of the health effects from biological contaminants can vary depending on the type of contaminant, the amount of exposure, and the person's individual health status. People with weakened immune systems are at an increased risk of developing health problems from biological contaminants.

There are a number of things that can be done to reduce the risk of exposure to biological contaminants in canals. These include:

- Avoiding contact with canal water: This includes swimming, wading, and fishing in canals.
- Washing your hands thoroughly after contact with canal water or objects that have been in contact with canal water.
- Avoiding eating fish or other aquatic animals that have been caught in canals.
- Keeping your home and yard clean and free of standing water.
- Using insect repellent when you are near canals.

If you think you have been exposed to biological contaminants from a canal, it is important to see a doctor right away. Early treatment can help to prevent serious health problems.

Here are some additional information about the health effects of biological contaminants:

- Bacteria: Bacteria are single-celled organisms that can cause a variety of infections. Some common bacterial infections that can be caused by exposure to canal water include:
 - E. coli: E. coli is a bacteria that can cause diarrhea, vomiting, and abdominal cramps.
 - Salmonella: Salmonella is a bacteria that can cause diarrhea, fever, and chills.
 - Shigella: Shigella is a bacteria that can cause diarrhea, fever, and abdominal cramps.
- Viruses: Viruses are tiny particles that can cause a variety of illnesses. Some common viral infections that can be caused by exposure to canal water include:
 - Hepatitis A: Hepatitis A is a virus that can cause liver inflammation.
 - Hepatitis B: Hepatitis B is a virus that can cause liver inflammation and cancer.
 - Hepatitis C: Hepatitis C is a virus that can cause liver inflammation and cancer.
 - Rotavirus: Rotavirus is a virus that can cause diarrhea in young children.
- Parasites: Parasites are organisms that live on or in other organisms. Some common parasitic infections that can be caused by exposure to canal water include:
 - Giardia: Giardia is a parasite that can cause diarrhea, bloating, and gas.
 - Amoebiasis: Amoebiasis is a parasite that can cause diarrhea, fever, and abdominal pain.
 - Schistosomiasis: Schistosomiasis is a parasite that can cause inflammation of the liver, lungs, and other organs.

CONCLUSION

The review shows that Gang Canal water shows high concentration of each major metal. Risks in the concentration of various important metals have been observed in different climates. The test shows that in these test conflicts the canal water is seen as antidote and cannot be used for proximate purposes with essentially no treatment. In fact this water is unsafe for human beings and can become helpful behind unhealthy diseases. The revelations that are happening during the nonstop survey are disturbing and bring speedy consideration from the additional concerned board and actual development for its protection so that ideal utilization of this wetland can be made.

REFERENCES

- Bailey, R. (2018). Chemistry of the environment. San Diego, Calif.: Academic Press.
- Barik, R. N., Pradhan, B., Patel, R. K. (2015), Trace elements in ground water of Paradeep area. J. Inal. Polln. Contl., 21(2): 355-362.

- Baysal, A., Ozbek, N. and Akm, S. (2013). Determination of Trace Metals in Waste Water and Their Removal Processes. Waste Water - Treatment Technologies and Recent Analytical Developments.
- Bhatt, D. M., Hegde Ganesh, R. (2017), Ground waters quality in Uttara Kannada Distt.of Karnataka. Indian J. Environ. Hlth., 39(1); 61-64.
- Borgaonkat, S. S., Gokhble ,K. S. (2019), Distribution of Copper, Zinc, Cadmium and Lead in Thane creek and its relation with textural types and organic carbon. J. Environ. Bio. , 13(1): 39-45.
- Dayal, G. and Singh, R. P. (2019), Heavy metal contamination of ground water in Agra city (U.P.). Proc. Natl. Acad. Sci. (India), 61(A): 569-572.
- Debendra, N., Guha, M., Haqueb, R., Ghosha, N., Dea, M., Santraa, A., Chakraborti, D. and Smithb, A.(2016), Arsenic in drinking water and the prevalence of respiratory effects in West Bengal, India.Int. J. Epidemol, 26(6):1047-1052.
- Gangal ,R. K. and Zutshik (2018), a comparative study of base metals in ground water and effluent of Khetri copper area and pollution from waste industrial effluent in khetri copper complex and nearby villages. Indian Journal of Environmental Agriculture, 3(1 & 2): 61-72.

