

## Health and Nutrition Stories From African Countries

By Jonathan Coleman, Pensa, Burkina Faso

Water pumped from the ground is fairly clean and free of rocks, dirt, mud, and mildew. But it's not free from microbes and viruses that are too small to be seen by the eye. This is why I filter and add bleach to my water. Using iodine tablets or boiling water are also good methods to ensure safety for cooking and drinking. Bathing water comes directly from the pump or barrage with no filtration treatment.

Many diseases can be carried in water, and one of them is Guinea worm. Burkina Faso is waging a national effort for the eradication of the Guinea worm. We're actually pretty lucky—a double layer of thin fabric is enough filter to stop Guinea worm from entering water stored in a bidon, cannarie, bareek, or other container. Each month, I go to the tiny satellite villages near Pensa to hand out filters and conduct hands-on training, demonstrating their use. One village, Yalgo, has almost 40 cases of Guinea worm, making it an endemic area. It is a tragedy because Guinea worm is very easy to prevent. But children and adults with Guinea worm have difficulty walking, working, and farming. They're also susceptible to tetanus and other infections and can easily infect other village water supplies. Guinea worm education in conjunction with water treatment training can be a very effective way to create a lasting, positive change in a village.

By Karen McClish, Belita II, East Province, Cameroon

My drinking water is not "fresh." The children are constantly sick with different waterborne illnesses. My neighbors know that they should boil their water to kill these critters and prevent their families from getting sick, but that takes time and energy (find the wood, start the fire, boil the water...). Not to mention that they would need to boil water for 10 to 15 people, the average family size here. So they don't do anything and they continue to get ill.

The water pump at the health center has been chlorinated and the water is safe to drink, but it is far from town, where everyone lives, and we have to pay to take water from there. However, the price to take water for a month is less than one day of medicines to treat amoebic dysentery.

By Shad Engkilterra, Banko, Guinea

The drinking water in Guinea is likely to be contaminated with any number of parasites—the most common among Peace Corps Volunteers are giardia and amoebas. I have had protozoa, and there have been cases of schistosomiasis. Conakry, the capital, has had two outbreaks of cholera in the last year.

These diseases are mostly gastrointestinal and can cause diarrhea. This is the leading cause of death among children in the region. Stagnant water is the breeding ground for mosquitoes, which transmit malaria, another killer of many people. The black biting flies that transmit onchocerosis—a leading cause of blindness—live around rivers. There are no programs in place to ensure clean drinking water in my village. Families drink pump water when it is available.

By Robert Joppa, Gumira, Chipinge District, Zimbabwe

According to Mr. Mukusay, the nurse in charge, 60-70% of the people here in Gumira have Bilharzia (Schistosomiasis). We also have a problem with malaria during the rainy season and with cholera because thieves stole wire fencing around the borehole. The fencing prevented domestic animals from coming close and contaminating the water. The only borehole with fencing is the Dakote River borehole, but goats seem to be able to get through. Last year several people died from cholera, but the community took no action.

As far as nutrition is concerned, Gumira is not scoring any points, as food is very limited in variety. We mostly eat "sadza," a corn mush with the consistency of mashed potatoes with no flavor and almost no nutrition. Sadza is eaten with a green leafy vegetable called "rape" and if you can afford it, goat. If you are rich you can get beef or chicken. Whenever I cook "American" (or as they say, "European") people are always amazed by the fact that there is taste. People don't seem to eat for pleasure here, but only to survive.

Boiling water from Save would probably result in the best tasting drinking water around. Great idea, but this would be cost prohibitive since during the war most of the trees were cut and all firewood is imported from the mountains. The mountains are currently running out of wood also, so firewood has become very expensive. Solar cookers could help lessen this problem. However, people here are extremely afraid of witchcraft. Cooking with a box and no fire is too strange. Gas is also a good alternative but everyone is afraid of being blown up. Solutions are never easy.

By Nell Todd, Mafi-Dove, Ghana

The boreholes in the town provide safe drinking water. However, many people (especially older people) don't like the taste of the borehole water. They grew up drinking river water because "it's sweet for them," and because it's what their forefathers drank. It takes time to develop new habits and the boreholes have been in the village for only two years. However, those that still drink river water sometimes boil it—this kills all living germs in it. Drinking water is stored in clay pots inside people's rooms. They keep it covered and the clay keeps the water cool.

The most common cause of contamination of the river water is human waste. Because there is a lack of latrines in the village, many people defecate by the river. Rain carries feces into the water and diseases are spread that way.

Bilharzia is one of the most common diseases found in this part of Ghana. Worms breed in snails that live in the weeds, and then the worms enter a person's body through the skin. A person who urinates in the water will pass eggs back into the river, completing a cycle. One of the primary symptoms of bilharzia is urinating blood.

By Amy Wiedemann, Gbefi, Volta Region, Ghana

There are two boreholes in my community that provide clean water, ready for consumption. The promise of clean water leading to good health is still not a strong enough argument to persuade everyone in the community to use the boreholes. All previous generations drank from the river. Some of those ancestors lived to be a hundred years old, while others died young from causes that had nothing to do with water. It's a tough argument. However, now the residents of Gbefi have a choice as to where they will fetch their water. As community and government health initiatives increase, the choice will become easier: either drink clean, clear borehole water from a hundred meters below the surface, or drink water from the River Dayi that contains runoff from the farm, soap suds from the laundry, and plenty of dirt.

The biggest obstacle to increasing clean water accessibility is the cost. Modern, state-of-the-art hydro-technology greatly exceeds the budget of subsistence farmers. However, I think accessibility is the key. If fetching water from a borehole is easier and more convenient than fetching it from the river, everyone will do it without a second thought. Compare it to recycling in the United States. Recycling is beneficial to the environment; no one can argue that. However, 15 years ago, it was a chore to recycle. You had to store all the materials in your house until you had time to deliver them to recycling centers. Aluminum went one place, glass to another, paper to a third, etc., so the process would take up at least half your day. But then came curbside pickup, just like the garbage and color-coded recycling bins outside grocery stores. Suddenly, someone who never considered recycling 15 years before is now doing it faithfully. It became easy and convenient to recycle. I believe the same would be true for people using clean drinking water in Ghana.

By Steve Tester, Odumase Krobo, Ghana

I am a very lucky Peace Corps Volunteer. I live near the KPONG Water Treatment Facility, so all my water comes from there. This is due to the fact that I live near the school. Even though my water's fluoride levels fluctuate, I have never fallen ill due to contaminated water at my site.

Peace Corps Volunteer Vikki Sturdivant was not as lucky as I was with respect to water. Her water source was initially Lake Volta. The water was contaminated and unpalatable, if not polluted. She has had tests on the water and found it contained Shigella, bacteria (of all sorts), and schistosomiasis parasites.

Obviously the impact on Ghanaians' health is severe. If a worker in the family becomes ill, then it affects the entire family. In some areas, water is treated or filtered, but hopefully in the near future they will have boreholes to provide water. I definitely prefer my insipid water to rancid disease-carrying water.

By Melissa Perry, Oyugis, Kenya

My water usually comes from a spring that is protected and well maintained by the Kenya Red Cross, so it should be fairly safe drinking water. However, I still boil my water and then filter it. Most of the families in my area boil their water for drinking. Since I've been in Oyugis, there has been a small outbreak of typhoid fever, which comes from water. There has also been a cholera outbreak. Cholera causes severe diarrhea and it can lead to death within a few days. This more often affects people in the very rural areas.