



NEWS

GUADALUPE-BLANCO RIVER AUTHORITY
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GBRA Emphasizes Importance of Water Quality in Water Recreation

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SEGUIN—Most people wouldn't think of jumping into a green or murky swimming pool. Yet, "every year, people become sick after swimming in ponds, lakes or streams that show signs of poor water quality," says Debbie Magin, director of water quality for the Guadalupe-Blanco River Authority (GBRA).

The most serious illness is primary amoebic meningoencephalitis or PAM, a rare form of meningitis. According to the Texas Department of Health (TDH), PAM is caused by a common microorganism found in almost all untreated surface water and in soil. The amoeba that causes the infection thrives in fresh water when temperatures are high, usually above 80 degrees.

Swimming pools and hot tubs use chemical disinfectants to prevent bacterial growth. However, ponds and streams contain bacteria that can increase to levels that may create health concerns during hot weather when flows and water levels are low.

"GBRA wants to help people make good decisions about when and how they take part in water recreation activities," said Magin. "To reduce the risk of exposure, anyone engaging in water recreation should follow these basic precautions:"

- Never swim in stagnant water.
- Avoid water that is not moving, is very warm or has an odor.
- Do not dive deeply, even in fresh water.
- Hold your nose, or wear nose plugs when jumping or diving into water or water skiing. Some experts think that the risk of certain diseases, such as primary amoebic meningoencephalitis, may be increased when water containing this protozoa is forced into the nose and surrounding tissues under pressure.

Magin said most public concerns center around two primary types of contamination. One is fecal coliform, primarily *E. coli* bacteria. Its presence in water is a serious health concern because it is usually associated with human or animal wastes.

However, a single "grab sample" from a flowing stream is like taking a snapshot. It only represents what the water was like at the time and place the sample was taken. According to the Texas Natural Resource Conservation Commission (TNRCC), even though a site meets contact recreation standards, this is "not a guarantee that the water so designated is completely free of disease-causing organisms."

The second concern is primary amoebic meningoencephalitis, or PAM. This disease is caused by exposure to an amoeba called *Naegleria fowleri* that thrives in warm, fresh water -- particularly if the water is stagnant or slow moving. These protozoa are found in a variety of water bodies, including lakes, ponds and poorly maintained swimming pools and hot tubs. Since a primary food source for the amoebae is coliform bacteria, the presence of significant numbers of coliform bacteria will promote growth of this amoeba.

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Although exposure to this organism is very common, the chance is less than 1 in 100 million that a person exposed to water inhabited by *Naegleria* will become infected. The few cases reported in Texas have occurred in the months of May through September. Symptoms include changes in the ability to taste or smell, rapidly followed by headache, fever, nausea and vomiting. While the disease is not transmissible from person to person, it is usually fatal.

Magin says that people should feel safe about their drinking water supplies. All approved public drinking water systems that use surface water must follow an extensive treatment process. The United States Environmental Protection Agency (EPA) and TNRCC have an enforceable drinking water standard that requires it to be free of total coliforms and *E. coli* bacteria. Drinking water that meets this standard is associated with little or no risk from pathogenic microorganism infection and should be considered safe.

In addition, since 1998 all community water systems are required to distribute a Consumer Confidence Report (CCR) to their customers with detailed information about their drinking water. These reports are available from your water supplier.

Most counties employ a sanitarian or other public health officer who is responsible for enforcing current health and safety regulations and public notification. Questions about the water quality at specific recreation sites or about general water quality issues should be directed to your local officials.

GBRA can provide technical information and historical water quality data for the Guadalupe or San Marcos Rivers, which is also listed on its website at www.gbra.org. Individuals with private ponds or water recreation sites can have samples tested for fecal coliform, at \$12 per test, by contacting the GBRA Regional Laboratory in Seguin at (830) 379-5822.