A FAMILY HEALTH RESOURCE

Safe Drinking Water for Pregnancy & Newborns

What every expecting family should know about their water - before and after baby arrives.

TOPICS COVERED

- Well water basics
- Formula preparation water
- Lead in plumbing
- Chlorine & chloramine
- When testing matters
- PFAS overview
- Nitrates
- Hard water vs. unsafe water
- RO systems explained
- Municipal vs. well water

UNDERSTANDING YOUR SOURCE

Well Water vs. Municipal Water

Where your water comes from shapes what's in it — and what steps, if any, are worth taking during pregnancy and the newborn period. Neither source is automatically "safe" or "unsafe." What matters is knowing what you have.

Municipal (City) Water

- Tested regularly — ask your utility for their Consumer Confidence Report
- Disinfected with chlorine or chloramine to kill bacteria
- Lead can still enter from aging pipes between the main and your tap
- PFAS contamination has been found in some municipal systems

Private Well Water

- Not regulated by the EPA — testing is the homeowner's responsibility
- No disinfectant added, so bacteria and nitrates are real considerations
- Quality can shift after heavy rain, flooding, or nearby land changes
- A basic test panel costs $50–$150 and is worth doing before pregnancy

A simple rule of thumb

If you are on a private well and pregnant, or have recently had a baby, testing your water at least once is a reasonable precaution — even if the water looks and tastes fine.

WELL WATER BASICS

What to Know About Private Wells

Private wells draw from groundwater — aquifers beneath your property. The water quality depends heavily on local geology, land use nearby, and the age and condition of the well itself.

Common concerns during pregnancy and for newborns:

- Coliform bacteria — indicates a possible contamination pathway into the well
- Nitrates — a particular concern for infants under 6 months (see next section)
- Naturally occurring minerals (arsenic, radon) that vary by region
- Pesticide or fertilizer runoff in agricultural areas

What a basic well test covers

Most state-certified labs offer a "pregnancy panel" testing for bacteria, nitrates, pH, hardness, and common metals. Your county health department can often point you to a certified local lab.

CONTAMINANT OVERVIEW

Nitrates

Nitrates occur naturally in soil and are also introduced through fertilizers, septic systems, and animal waste. They're particularly important in the context of infant feeding.

Important for infants under 6 months

High nitrate levels can interfere with a baby's ability to carry oxygen in the blood — sometimes called "blue baby syndrome." The EPA's limit is 10 mg/L. If formula is mixed with well water, knowing your nitrate level matters.

- Breastfed babies are generally protected, as nitrates don't transfer significantly into breast milk
- For formula-fed babies, nitrate levels above 10 mg/L warrant using an alternative source or a certified filter
- Boiling water does NOT remove nitrates — it actually concentrates them

CONTAMINANT OVERVIEW

Lead

Lead rarely comes from the water source itself. It typically enters drinking water through older plumbing — lead service lines, solder, or brass fixtures. This is as much a concern in older city homes as in rural properties.

- There is no safe level of lead exposure in children or during pregnancy
- Homes built before 1986 are most likely to have lead-containing plumbing
- Running cold water for 30–60 seconds before use can reduce (but not eliminate) lead at the tap
- NSF/ANSI 53-certified filters and reverse osmosis systems effectively remove lead

One thing worth knowing

Lead exposure during pregnancy is associated with preterm birth and developmental effects in children. If your home was built before 1986, testing is a low-cost step with real peace of mind either way.

CONTAMINANT OVERVIEW

PFAS — "Forever Chemicals"

PFAS (per- and polyfluoroalkyl substances) are synthetic chemicals used in non-stick cookware, food packaging, firefighting foam, and many industrial processes. They break down very slowly — hence the nickname.

› PFAS have been found in both municipal and well water, particularly near military bases, airports, and certain manufacturing areas

› Some research links PFAS to pregnancy complications, thyroid disruption, and effects on infant immune development

› In 2024, the EPA finalized new limits for several PFAS compounds in public drinking water

› Standard carbon filters do not reliably remove PFAS — reverse osmosis and specialized filters are more effective

How to find out if PFAS are in your area

The Environmental Working Group maintains a publicly searchable database at ewg.org/tapwater. Your state environmental agency may also have localized data.

MUNICIPAL DISINFECTANTS

Chlorine & Chloramine

Municipal water suppliers add disinfectants to kill harmful bacteria and viruses. Both serve an important public health purpose — they're why waterborne illness from tap water is rare in the U.S.

Chlorine

- Dissipates naturally if water sits uncovered for a few hours
- Taste and odor are noticeable to some people
- Can be reduced with a basic carbon block filter

Chloramine

- Does not dissipate simply by letting water sit
- More stable — designed to last further into the distribution system
- Requires a catalytic carbon filter or reverse osmosis to remove effectively

For most healthy adults and during pregnancy, chlorinated tap water is considered safe at regulated levels. Knowing which disinfectant your utility uses is easy — it's in the Consumer Confidence Report or a quick call to your water company.

COMMON CONFUSION

Hard Water vs. Unsafe Water

This is one of the most common points of confusion among families who do home water testing. **Hardness and safety are different things.**

› **Hard water** contains elevated levels of calcium and magnesium — naturally occurring minerals that are generally not harmful to drink

› Hard water causes scale buildup in pipes and appliances, dry skin and hair, and spotty dishes — but it is not a health concern at typical levels

› Very soft water (especially if run through a salt-based softener) may contain elevated sodium — something to be aware of in formula preparation

› A water report showing "high TDS" (total dissolved solids) or hardness is not the same as finding lead, PFAS, or bacteria

Bottom line

Hard water can be a nuisance. It is not typically a safety issue. If a test report causes concern, look specifically at what's elevated — not just the overall hardness number.

INFANT FEEDING

Water for Formula Preparation

For formula-fed babies, the water used for mixing is genuinely worth thinking through. A few practical points:

› Most formula brands are designed to be mixed with fluoridated tap water — check your brand's guidance

› If using well water, test for nitrates and bacteria first

› Sterile bottled water labeled for infant use is an option, though it is not fluoridated and can be expensive long-term

› If using filtered water (including RO water), confirm your formula is providing adequate minerals — RO removes nearly everything, including beneficial minerals

› Boiling water kills bacteria but does not remove chemical contaminants like PFAS, nitrates, or lead

FILTRATION OPTIONS

Reverse Osmosis (RO) Systems, Explained Simply

Reverse osmosis pushes water through a very fine semi-permeable membrane, removing a wide range of dissolved contaminants. It's one of the most comprehensive household treatment options available.

What RO effectively removes

- Lead and heavy metals
- Nitrates
- PFAS (most compounds)
- Chlorine and chloramine
- Fluoride
- Many pharmaceuticals & industrial chemicals

Practical things to know

- Under-sink units: $200–$400 plus for annual filter changes
- Produces water slowly into a small storage tank — water on demand optional
- Look for NSF/ANSI 58 certification
- Produces 1–2 gallons of wastewater per gallon filtered
- Removes minerals too — a consideration for formula mixing

Is RO right for your family?

RO makes the most sense when testing reveals specific contaminants (PFAS, nitrates, lead) that simpler filters can't address. Targeted filters matched to known contaminants can be equally effective and less expensive.

MAKING DECISIONS

When Does Testing Actually Matter?

Testing isn't always necessary — but there are situations where it provides genuine value:

Worth testing when...

- You are on a private well and pregnant or planning to become pregnant
- Your home was built before 1986 (lead plumbing concern)
- You live near a military base, airport, or industrial facility (PFAS concern)
- You've had unexplained plumbing issues or water discoloration
- Your well has never been tested, or not tested in several years

Probably lower priority if...

- You are on municipal water with a recent, clean Consumer Confidence Report
- Your home has newer plumbing (post-1986) with no known issues
- Your well has been tested in the last 1–2 years and results were normal
- Your concern is primarily about taste or hardness (not safety)

FREE RESOURCES FOR FAMILIES

Where to Look Up Your Water

These are free, reliable starting points — no purchase required.

EWG Tap Water Database ewg.org/tapwater

Search by zip code to see contaminants — including PFAS — detected in your local municipal water supply. One of the most accessible and completely free tools available to families.

Consumer Confidence Report (CCR)

Every municipal supplier publishes this report each year listing every contaminant detected and how levels compare to EPA limits. Call your water company or check their website — it's required to be publicly available.

Your County Health Department

Can refer you to a state-certified lab for well water testing. Some counties offer low-cost or subsidized testing for pregnant families.

A Note to Families

Water quality during pregnancy and the newborn period is worth a conversation — but it doesn't need to be overwhelming. In most cases, a single test or a quick check of your local water report is enough to give you a clear picture.

The goal of this resource is simply to make sure you have accurate, plain-language information so you can ask the right questions and make choices that feel right for your family.

Questions about your water?

If families have questions — about test results, filtration options, or what steps make sense for their situation — Pure Flow Water is available as an educational resource.

■ **pureflowwater.com**

✉ **info@pureflowwater.com**

PA 215-770-5185 **NJ 856-288-8500**

This packet is for educational purposes only. It is not medical advice. For health concerns during pregnancy or related to infant feeding, consult your midwife, physician, or lactation consultant.