

### Where can I get my water tested?

Testing for nitrate and bacterial contamination should be carried out at an approved laboratory. Community and Public Health and the Environment Canterbury website have a list of accredited laboratories that can be used for testing.

### Further Information

Community and Public Health

03 364 1777

[www.cph.co.nz](http://www.cph.co.nz)

Environment Canterbury (ECAN)

03 353 9007

0800 324 636

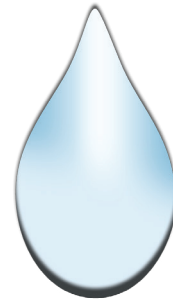
(0800 EC INFO)

[www.ecan.govt.nz](http://www.ecan.govt.nz)

Nitrate maps are available from:

Community and Public Health

[www.cph.co.nz](http://www.cph.co.nz)



## Canterbury

District Health Board

Te Poari Hauora o Waitaha

Community and Public Health

310 Manchester Street

Christchurch

Phone: 03 364 1777

Fax: 03 3796125

[www.cph.co.nz](http://www.cph.co.nz)

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# Nitrate in Drinking Water

## “BLUE BABY” Syndrome



## What is Blue Baby Syndrome (methaemoglobinaemia)?

Methaemoglobinaemia can affect babies less than six months of age or in the womb.

Exposure to high nitrate levels in drinking water may prevent the blood from delivering oxygen effectively in the body.

As a result an infant may develop blueness around the mouth, hands and feet. If severe, the condition can affect breathing and may be life-threatening.

## What is nitrate and where does it come from?

Nitrate ( $\text{NO}_3$ ) is made up of Nitrogen and Oxygen.



Land uses such as farming and sewage disposal systems release nitrate to the soil. Nitrate is highly soluble, so is easily transported through the soil into groundwater.

## How do I know if my water is high in nitrate?

Council water networks in Canterbury currently have safe levels of nitrate in their water.

If you have your own drinking-water well, you can check risk for your area on maps that identify where nitrate levels in drinking water may be a concern (available on Environment Canterbury's website).

If you live in an area with moderate to high risk, you need to get your drinking water tested. Several laboratories can test for nitrate in a water sample. The laboratory must be contacted first because they provide special sampling containers and recommendations.

The Drinking Water Standards give a Maximum Acceptable Value (MAV) of 50mg/L for nitrate, which is equivalent to 11.3mg/L nitrate-N. Check with your laboratory or Community and Public Health for result interpretation.

Nitrate levels do vary over the year. They are often highest in spring, and in areas where there is extensive irrigation, high nitrate levels can be found in late summer.

## What do I do if my well is high in nitrate?

Nitrate is difficult to remove from water. Household cartridge / carbon filters, chemical treatment and boiling will not remove nitrate. Reverse osmosis and ion exchange can remove nitrate however these are expensive options.

**If your drinking water is at a level exceeding the health limits, find an alternative water source, use bottled water or investigate effective treatment options.**

If your water is high in nitrate, contamination is occurring. This means bacteria could also be in the water. Bacteria can increase the likelihood of methaemoglobinaemia and cause other diseases, so don't forget to test for the bacteria E.coli at the same time.

## Who is at risk?

High risk groups include:

- ▶ bottle fed babies less than six months old
- ▶ babies given boiled water
- ▶ pregnant women

Exclusively breastfed babies are **not** at risk because nitrate does not pass into breast milk. People in high risk groups should not consume water that is high in nitrate.