SODIUM CONCENTRATIONS IN WATER SUPPLIES

SODIUM IS NATURALLY FOUND IN LOW CONCENTRATIONS IN DRINKING WATER SOURCED BY HUNTER WATER

WHILE THERE IS NO HEALTH BASED GUIDELINE FOR THE CONCENTRATION OF SODIUM IN DRINKING WATER, CUSTOMERS ON LOW SODIUM DIETS SHOULD BE AWARE OF THE SODIUM CONCENTRATION OF THEIR DRINKING WATER

HOW DOES SODIUM ENTER WATER?

Sodium salts are highly soluble in water and are naturally found in low concentrations in drinking water sourced by Hunter Water.

WHAT LEVEL OF SODIUM IS IN DRINKING WATER SUPPLIED BY HUNTER WATER?

The concentration of sodium in drinking water supplied by Hunter Water over the last 5 years ranged from 5 to 35mg/L, and had an average concentration of 20mg/L.

This is well within the recommendations of the National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines.

The guidelines for sodium concentration in drinking water based on aesthetic (taste) considerations, is that sodium concentration should not exceed 180mg/L.

IS SODIUM SAFE?

Sodium is an essential mineral for the human body. It helps the function of nerves and muscles, absorption of nutrients and helps the body to maintain an adequate water and mineral balance.

Daily consumption of sodium should be in the range of 1-3g/day. People on a low-sodium diet should restrict their sodium intake to less than 2g/day. As a guideline, the daily intake of sodium from drinking water containing 20mg of sodium per litre would be approximately 40mg.

While no health-based guideline has been proposed for sodium by NHMRC, customers with severe hypertension or congestive heart failure should make their medical practitioners aware if the drinking water contains sodium concentrations higher than 20mg/L.

CONCENTRATION FACTS

SOURCES OF SODIUM EXPOSURE

Food is the main source of daily sodium exposure. It is naturally present in foods such as meats, nuts, grains, fruits and vegetables, and is often added during food preservation and processing.

Table 1 Typical Sodium Concentrations

Source	Sodium Concentration*
Drinking Water	5-33 mg/L
Cows milk	770 mg/L
Fresh fruit & vegetables	<10-1000 mg/kg
Cereals & Cheese	10,000-20,000 mg/kg

*values taken from World Health Organisation (WHO), 1996

IDENTIFYING SODIUM CONCENTRATIONS IN YOUR DRINKING WATER

On average, water supplied by Hunter Water has a low sodium concentration of 20mg/L. For each Local Government Area (LGA) supplied by Hunter Water, the water quality varies slightly as different water sources are used. The water treatment plants that service each LGA are shown in Table 2. The minimum and maximum concentrations of sodium in water from each of Hunter Water's treatment plants is shown in Table 3.

Drinking Water Sourced from the Central Coast

Hunter Water occasionally uses water from the Central Coast to meet demand. At times, water from the Central Coast may contain an elevated concentration of Sodium. The typical concentration of Sodium in Wyong Shire Council treated water is 35mg/L, however due to a salt water intrusion at Mardi Dam in May 2009, the current concentration of sodium is about 80mg/L. This concentration will decrease back to typical levels by mid 2010.

If you require further information about water supplied from the Central Coast to Hunter Water please contact Hunter Water on 1300 567 000.

Table 2 Identifying your water supply system

Areas	Water Treatment Plant
Newcastle, Lake Macquarie	Grahamstown & Dungog WTPs
Western Lake Macquarie, Wangi, Morisset, Dora Creek, Eraring, Cooranbong, Wyee	Grahamstown & Dungog WTPs. Occasionally these areas can be supplied by the Central Coast
Raymond Terrace, Tomago, Medowie, Stockton, Kooragang	Grahamstown WTP
Maitland, Kurri, Cessnock, Branxton, Tarro, Beresfield, Seaham	Dungog WTP
Dungog, Paterson, Martins Creek, Clarencetown	Dungog WTP
Gresford, East Gresford	Gresford WTP
Anna Bay, Salamander, Soldiers Point, Boat Harbour, Fishermans Bay, Corlette	Anna Bay & Grahamstown WTPs
Nelson Bay, Fingal Bay, Shoal Bay	Nelson Bay, Grahamstown & Anna Bay WTPs
Lemon Tree Passage, Karuah, Mallabula, Oyster Cove, Swan Bay	Lemon Tree Passage WTP

Table 3 Typical concentration of Sodium in water supplied by each plant*

Water Treatment Plant	Sodium Concentration mg/L	
	min	max
Grahamstown WTP	22	30
Dungog WTP	5	8
Lemon Tree Passage WTP	11	14
Anna Bay WTP	22	26
Nelson Bay WTP	27	33
Gresford WTP	10	35

*over the 5 year period July 2004-July 2009