Introduction
A well maintained spa pool can provide many hours of enjoyment but, if not properly looked after, it can become contaminated with harmful bacteria and other organisms which can cause serious illness. This short guide is intended to assist homeowners and occupiers manage the health risks associated with using their own spa pools.

Health Risks
Like swimming pools, spa pools can be contaminated with harmful bacteria and other organisms. If not controlled, these microbes can cause a range of diseases, including:

- Skin, ear and eye infections,
- Gastrointestinal infections,
- Serious, potentially fatal respiratory infections such as Legionnaires’ Disease, and
- Infections of the central nervous system.

The very young, the elderly and the immunocompromised are at particular risk of contracting these diseases.

Managing the health risks
Fortunately, the chance of becoming ill after using a private spa pool can be greatly reduced by taking a few simple precautions:

- Maintaining the right level of disinfectant,
- Maintaining the right pH,
- Ensuring your filter is operating properly, and
- Replacing water when required.

Maintaining the right level of disinfectant
One of the most effective ways of managing the health risks associated with the use of private spa pools is to maintain the right level of disinfectant in the water. Chlorine and bromine are the two most effective and most commonly used disinfectants for spa pools. By quickly killing disease-causing organisms, these disinfectants can prevent the transmission of disease.

To be effective, it is essential that the right level of disinfectant is maintained at all times. The table below lists the minimum levels for chlorine and bromine in spa pools. Disinfectant levels should be tested prior to use and at least three times a week.

<table>
<thead>
<tr>
<th>Disinfectant</th>
<th>Minimum level</th>
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<tbody>
<tr>
<td>Free chlorine</td>
<td>2 mg/L</td>
</tr>
<tr>
<td>Bromine</td>
<td>4 mg/L</td>
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If your spa pool uses a different disinfectant, it is important that the manufacturer’s recommendations are followed.

Maintaining the right pH
The pH scale measures how acidic or basic the water in your spa is. The pH of the water in your spa is important because it affects the effectiveness of the disinfectant you use. It is therefore essential that the right pH is maintained at all times. The pH of the water in your spa pool should be maintained between 7.2 and 7.8. The ideal pH is 7.5.

Alkalinity is a measure of how resistant the water in your spa is to changes in pH. Water with a low alkalinity will be very susceptible to changes in pH, whereas water with a high alkalinity will be effectively resistant to changes in pH. To help ensure the right pH is maintained, total alkalinity should be maintained between 80 and 200mg/L.
Both pH and alkalinity should be tested prior to use and at least three times a week during use.

Test kits and advice on interpreting results can be obtained from your local spa and swimming pool chemical supplier.

Filtration
Effective filtration is essential to maintain good water quality. Effective filtration removes material that can promote the growth of harmful organisms and shield them from disinfectants. Clean the filter and empty the hair strainer regularly.

Water replacement
Some of the water in your spa pool will need to be replaced when the level of total dissolved solids (TDS) becomes elevated. Total dissolved solids is a measure of the inorganic salts and the small amounts of organic matter that are dissolved in the water. It generally increases with increased use of the spa pool. Your local swimming and spa pool chemical supplier will likely be able to test for TDS and inform you when you need to replace a proportion of the water in your spa pool. Alternatively, you can replace at least one quarter of the water in your spa pool monthly.

Dispose of your used spa water in accordance with local laws. Enquire with your local council if you are not sure of the laws that apply in your area.

Shock dosing
Spa pools should be shock dosed at least weekly, and more often if the spa pool is in constant use. Your local swimming and spa pool chemical supplier will likely be able to advise you on the most suitable method of shock dosing. The cover should not be placed over the spa pool during the shock dosing process.

Cover when not in use
Cover the spa pool when not in use to prevent leaves, dust, pollen and insects, as well as animal and bird faeces, from contaminating the water.

General health and safety
For health and safety:
- Always keep your head above water,
- Limit the maximum temperature to 38°C (35-37°C is ideal) and spend no longer than 15 minutes in a spa pool at any one time,
- Always supervise children using a spa pool,
- Discourage nose blowing, spitting and urinating in a spa pool,
- Handle and store all pool chemicals safely,
- Ensure the spa pool is properly fenced,
- Shower before using the spa pool,
- Do not use the spa pool if you have had diarrhoea in the past 14 days, and
- If your friends or family have suffered an infection from your spa, consider a full decontamination of the spa. Advice on this can be provided by your swimming and spa pool chemical supplier or other appropriately trained pool technician.

Further information


For general information, contact your local Public Health Unit: http://www.health.qld.gov.au/system-governance/contact-us/contact/public-health-units/default.asp

Call 13 HEALTH (13 43 25 84) to speak to a health professional