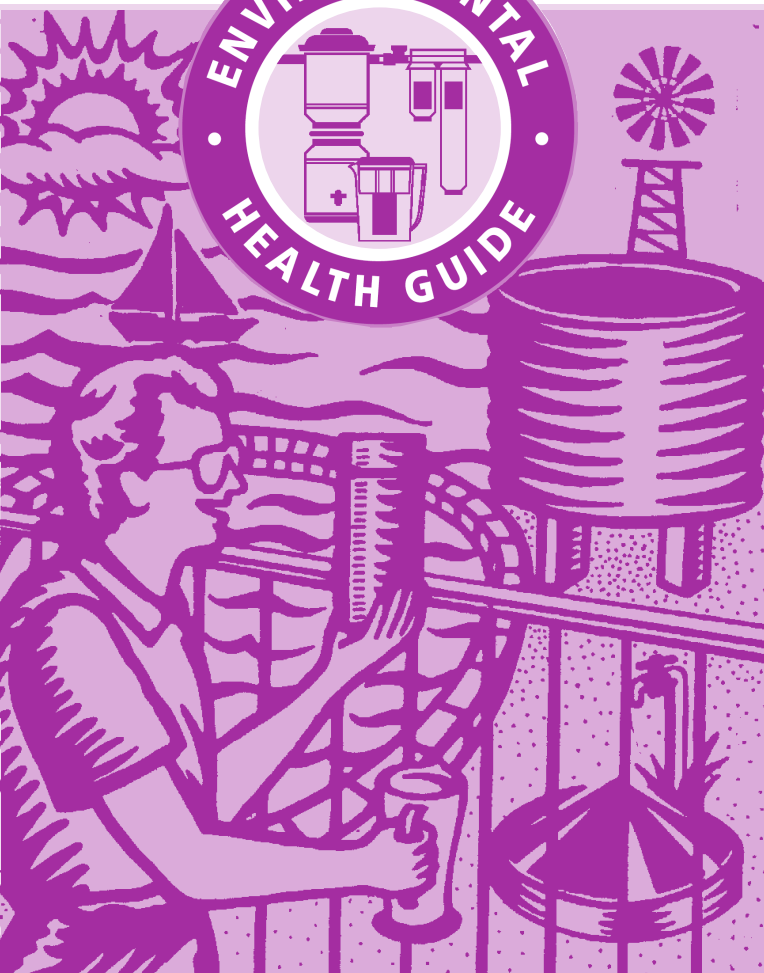
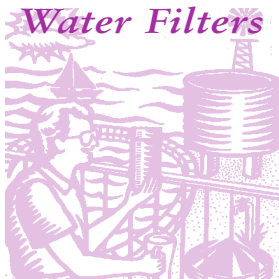


# *Water Filters*



## *Water Filters*



*Many types of water filter are available for purchase or hire. They range from the simple bench top style to sophisticated systems requiring special plumbing and electrical work. This pamphlet will help people*

*decide if a water filter is really necessary and which type to choose.*

### *How do filters work?*

Water filters work by physically blocking or entrapping debris and, depending on the system, bacteria. Generally, the flow of water through a filter decreases as the filter size decreases. As the barrier becomes clogged the flow of water is reduced. Careful consideration should therefore be given to the quantity of water needing filtration and the time it takes to be filtered, before purchasing a water filter. Usually, as the flow of water increases, so does the cost.

### *Will a filter remove the taste and odour of water?*

Several filters currently on the market will effectively improve the aesthetic quality of water. Tastes and odours can be removed by filtration whether they are naturally occurring or caused by the disinfection process.



### *Will it filter out or remove bacteria?*

Only the reverse osmosis systems will effectively remove all the micro-organisms that may cause illness. In fact, some water filters may act as a reservoir in which organisms may multiply to greater levels than in the water supply.

Also, as some filters remove residual biocide e.g. chlorine, it is possible that bacteria will re-grow unless the filtered water is stored in a sterile container in a cool, dark place.

## *Will a filter soften hard water?*

Some filters will soften hard water. Hard water contains calcium and magnesium salts which results in:

- the need to use more soap;
- a build up of scale on plumbing fixtures; and
- a metallic taste to water.

## *Does scheme water need filtering?*

It is not necessary to filter scheme drinking water supplies. The monitoring requirements imposed by the National Health & Medical Research Council ensure that drinking water provided to consumers is of the highest quality both microbiologically and chemically



## *Should dam, stream, bore or rainwater be filtered?*

Filtering may not disinfect these water supplies. The Health Department of Western Australia recommends that all naturally sourced water be disinfected before consumption. The simplest method of disinfecting water is with chlorine. However, other systems such as ultra violet light, reverse osmosis, amongst others, may also achieve suitable disinfection.

## *Filter types available*

The following types of water filter are currently available to consumers:

- Polypropylene and Ceramic
- Activated Carbon
- Reverse Osmosis and Distiller

The most sophisticated are reverse osmosis and distiller filters.

## *Polypropylene and ceramic filters*

These filters function by removing particles from the water. The polypropylene and ceramic fibres are packed tightly together to form a fine mesh screen that physically traps and removes foreign particles from the water. However, as these filters become clogged it is necessary to dispose of the filter or cartridge and replace it with a new one. Some filters may also soften hard water.



## *Activated carbon filters*

These filters are most effective in removing chemicals such as iron, manganese, chlorine, hydrogen sulphide, etc., objectionable tastes, colouration and odours. Some may also contain iron exchange resins that can remove hardness from the water. Neither the polypropylene, ceramic, or activated carbon filters should be relied upon to remove micro-organisms from water.



## *Reverse osmosis filters and distillers*

These filters are the most sophisticated and are extremely efficient and capable of removing bacteria and most residual chemicals including minerals from a water source. However, reverse osmosis filters will not remove the rotten egg smell of hydrogen sulphide from the water.

### *How much do they cost?*

The cost of water filters vary considerably. In general, the more efficient the filter the greater the cost. Some filters are simple two-tiered jugs while others are intended to be connected directly to the kitchen tap and are located either on or under the bench. Reverse osmosis filters are the most sophisticated and, therefore, the most expensive to purchase, install and operate.

### *Which one to choose?*

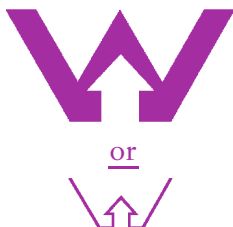
For discoloured water with fine particles of grit and other foreign material, a polypropylene or ceramic filter will effectively remove such sediment. It will not remove bacteria.

To remove naturally occurring or disinfection tastes and odours from scheme water supply, an activated carbon filter is more appropriate. It will not remove bacteria.

To remove all chemicals (both natural and added) and bacteria, a reverse osmosis or distiller system would be required. This should produce very pure water.

## *Quality control of water filters*

From June 1993 all fixtures and appliances have to carry either a standard WaterMark or Plumbing Safety TypeTest Mark. This mark assures the purchaser that the apparatus has been tested by an independent laboratory and will function properly.



### *Maintenance*

- Read the manufacturer's instructions.
- Maintain regularly.

Where applicable:

- Flush every day before use or after 12 hours without use.
- Remove, wash and scrub the filter regularly.

### *Checklist for using or purchasing a water filter*

- Ascertain the quantity of water to be filtered at one time.
- Buy a filter appropriate for your needs which has the standard WaterMark or plumbing safety TypeTest mark.
- Disinfect all water, except scheme water, before using the polypropylene, ceramic and activated carbon filters.
- Replace the filter according to the manufacturer's recommendations.
- Back flush the filter every morning, where applicable.
- Clean the filter regularly, where applicable.
- Store filtered water in a sterile container in a cool, dark place to prevent contamination.



## *Other water safety guides available*

How safe is recreational water?

How safe is your drinking water?

Is the water in your rainwater tank safe to drink?

Pool sense at home

## *Further information*

For further information contact your local government Environmental Health Officer

or

Applied Environmental Health  
Environmental Health Service

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Stirling Street

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Telephone: (08) 9388 4999

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<http://www.public.health.wa.gov.au>



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