

DEHYDRATION

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Dehydration or heat exhaustion is when the 'body dries out' due to the loss of more fluid than the body takes in. Heat, exercise, vomiting, diarrhoea and poor fluid intake can all contribute to dehydration.



PREVENTION

To prevent dehydration you should hydrate early – this is before you start to feel thirsty.

When working and exercising in hot climate condition, you need to

- Drink 1 cup (250mls) of water every ½ hour
- Drink water or sports drinks only
- Increase fluid intake if urine is dark in colour.

SYMPTOMS

The symptoms of mild dehydration are:

- Muscle Cramps
- Headache
- Dizziness
- Pale, clammy skin
- Dark coloured urine

TREATMENT

If symptoms appear you should start treatment immediately by:

- Cooling the casualty
- Giving frequent small drinks of water or ORS (oral rehydration solution)

Recipe for non medicated ORS

¾ x teaspoon Table Salt, 1 x teaspoon Baking Powder

4 x tablespoons Sugar, 1 x cup Orange Juice

Mixed in 1 litre of water (Courtesy of the World Health Organisation)

HEAT STROKE

If dehydration is not treated early it can lead to Heat Stroke. Heat Stroke is caused by exposure to extreme heat and dehydration. Symptoms are:

- Exhaustion and general weakness, which may lead to collapse and unconsciousness
- Pale cool, clammy skin
- Nausea and/or vomiting
- Rapid and weak pulse and rapid, noisy breathing

Urgent medical treatment is required

Cool the casualty using wet towels / Ice packs to the groin and armpit areas. Urgently seek medical help by calling 000 or mobile 112. If in a very remote location contact the **Royal Flying Doctor Service on 1800 625 800 or 08 9417 6389**



URINE COLOUR TEST FOR DEHYDRATION

If the water in the body is balanced, the urine will be a pale straw or lemonade colour. When water loss from the body exceeds water intake, the kidneys need to conserve water, making the urine much more concentrated with waste products and subsequently darker in colour.

Dark yellow urine is a sure indicator that the individual is dehydrated and that the fluid consumption must be increased. The aim is to produce urine no darker than colour 3 of the Urine Colour Chart (see below). Desire to urinate less than twice per day and/ or producing urine darker than colour 3 in the chart indicate severe dehydration; the individual must start drinking immediately.

Interpretation:

The urine colour should be compared to the chart to the left. The lower the number, the better the result. A urine colour rating of 1, 2 or 3 is considered to be well-hydrated (Armstrong, 2000). Based on these results, changes in fluid intake can be made.

Precautions:

Certain medicines and vitamins may cause the colour of the urine to change. If any of these have been taken, this test is unreliable. The colours you see on this chart should only be used as a guide. If more accurate comparison is required, please go to an original source.

This Urine Colour Chart has been adapted from Armstrong 2000



Heat Category	WBGT Index, C	EASY WORK Water Intake (mLs per hour)	MODERATE WORK Water Intake (mLs per hour)	HARD WORK Water Intake (mLs per hour)
1	26 - 28	500	700	700
2	28 - 30	500	700	950
3	30 - 31	700	700	950
4	31 - 32	700	700	950
5	> 32	950	950	950

The fluid replacement volumes will sustain performance and hydration for at least **4 hours** of work in the specified heat category. Fluid needs will vary on individual differences and exposure to full sun or full shade.

CAUTION: Hourly fluid intake should not exceed 1.420 litres. Daily fluid intake should not exceed 11.3 litres