Staying Hydrated

Ileostomy and Internal Pouch

Salt & water in body's cells

Oral Rehydration

Hypertonic drink to rehydrate cells

HYPERTONIC DRINK

> 90mmol / litre

Salt molecules move from the gut into the body?

Symptoms of dehydration

Salt and water hydrate the body

Salt and water lost from body

Person drinks plain water

Exercising      higher liquid output      vomiting      hot or sweating

Replace lost fluids and electrolytes

Body's cells

Small intestine

Salt & water in small intestine
**Staying Hydrated**

**The role of the digestive system**

After swallowing, food and drink travels down the oesophagus (the pipe connecting your throat to your stomach) and into your stomach. Here strong digestive enzymes break down what you’ve eaten further before moving it into the small intestine. The small intestine digests and absorbs the nutrients in the food and drink we eat for use within the body. The remaining food moves into the large intestine or colon. The large intestine absorbs salt and around 80% of the liquid still present in your waste (faeces) before typically passing a formed stool (faeces).

If you have an ileostomy or an internal pouch, the large intestine is no longer connected or has been removed and cannot absorb salt or liquid from the body’s waste. This is why the output from an ileostomy or an internal pouch is not formed and contains more liquid. The small intestine does absorb liquid but not in the same way as the large intestine.

**Drinking water**

When you’re thirsty it’s normal to drink to quench your thirst. You can usually drink anything, especially lots of water. Your body uses it to keep the water content in your body at the required level (this is known as hydration). Water is vital as it helps digestion, helps to flush waste products from your body and helps to keep your skin and joints healthy. On average around two-thirds of your body is water.

If the water content in your body is reduced, this can upset the balance of minerals (sugar and salt) that the body needs to function which can lead to dehydration.
If you have an ileostomy or an internal pouch you may need to think more carefully about what you drink in order to maintain your body’s hydration.

If your stoma or pouch output is ‘normal’ (like a porridge-type consistency) and you are not feeling thirsty, then you are probably drinking adequately.

It may be suggested by your stoma care nurse that you drink ‘flat’ cola and eat a packet of salty crisps to increase or maintain the sugar and salt levels in your bowel. This may only be necessary if you are not already eating a balanced diet. This will not treat dehydration but may help to prevent it.

Other foods to consider include:

- Low fibre foods (e.g. white bread, white rice)
- Ripe bananas
- Tapioca
- Marshmallows
- Jelly babies
- Smooth peanut butter
- Kippers
- Bovril®/Marmite®

With an ileostomy or an internal pouch however drinking lots of water alone may, on occasions, affect the balance of minerals (sugar and salt) and increase the risk of dehydration. This could be:

- if the output from your stoma or internal pouch is very watery or loose
- in hot weather
- during physical exercise
- if you are vomiting
- if you already feel dehydrated (extra thirsty).

How can water increase dehydration?

Water and salt (or sodium as it is in the body) move through the wall of the intestine by processes called ‘osmosis and diffusion’; these processes move water and salt (sodium) from an area where they are more highly concentrated (in greater amounts) to an area where they are less concentrated to ‘even’ the balance or level of concentration between the two areas.

Put simply, if you drink water (a weak or low concentration fluid, i.e. no/low salts or sugars), salts such as sodium move from inside the body’s cells, where they are more highly concentrated, through the wall of the bowel into the bowel itself, where they are less concentrated. This ‘evens out’ the sodium (salt) levels between the
body’s cells and the bowel. This will lead to the salts being lost when excreted from the body.

**Dehydration**

Reducing the level of salt (sodium) in the body’s cells to below the level needed by the body to work effectively, can lead to clinical dehydration. If the symptoms are not recognised and you do not replenish the lost fluid effectively, in extreme cases this can lead to being hospitalised.

Initially you may experience symptoms such as

- thirst
- decrease in urine output
- darker colour urine
- lethargy
- nausea
- cramps
- dizziness
- dark rings under the eyes
- low blood pressure
- ringing in the ears.

To reverse these symptoms drink fluids that are more highly concentrated (contain more sugar and salt) than the water already in the body. Through the processes of ‘osmosis and diffusion’, as described above, drinking fluid containing higher levels of salt and sugar will enable its absorbion by the small bowel and begin to rehydrate the body (increase the level of water).

Glucose (sugar) is also required to aid the absorption of salt from our food and drink otherwise the body cannot move the salt (sodium) from the bowel into the body’s cells and the water will not be absorbed as quickly.

**Rehydrating effectively**

Rehydration drinks are often referred to as ‘sugar-salt’ or ‘carbohydrate-electrolyte’ solutions.

Examples of sugar-salt drinks that you can make at home are the St. Mark’s and the Oxford Solutions – the recipes are shown over the page.

In the short term, commercially available solutions such as Dioralyte® can be used (similar products from the pharmacy may also be as suitable), but to achieve the correct concentration (i.e. to make a drink that is more concentrated than the fluid in the body’s cells so that the body absorbs it) they need to be made double strength (i.e. two sachets in a glass of water). These should not be taken in this form for long as
they are too high in potassium.

Good quality coconut water (not coconut milk) is also a good hydrator as it contains a high concentration of simple sugars, electrolytes and minerals, and is more concentrated than the fluid in the cells of the body so it will be absorbed into the body as above.

Low fat cow’s milk is also a good hydrator and will often be found at home (the exception being for those who are lactose intolerent).

References

A list of references is available upon request. Please contact IA for further information.

### St. Mark’s Solution

- 6 x 5ml glucose powder
- 5ml table salt
- 2.5ml sodium bicarb or citrate

**Make up to 1 litre with water**

*Chill and flavour as desired. Sip throughout the day.*

### Oxford Solution

- 200ml squash concentrate *(not low sugar or sugar free)*
- 1 level 5ml spoon salt

**Make up to 1 litre with water**

*Chill and flavour as desired. Sip throughout the day.*
Replacing lost Fluids with an Ileostomy or an Internal Pouch

**Fluid loss:**
Exercise, higher liquid output, hot/sweaty or a bout of diarrhoea/vomiting leads to fluid loss

**Salt and water replaced:**
Drinking a ‘hypertonic’ fluid increases salt and water absorption into the body’s cells and hydrates you.

**Salt and water lost:**
Drinking a ‘hypotonic’ fluid (such as water) increases loss of salt and water from the body’s cells.

**Symptoms of dehydration**
- Increased thirst
- Dry mouth/ Swollen tongue
- Weakness/ Sluggishness
- Heart jumping or pounding
- Dizziness and confusion
- Fainting
- Inability to sweat
- Concentrated/ Decreased urine output