Rehydration Solutions: Made at Home

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The "simple solution" - Do-It-Yourself .... Encouraging self-reliance

The *most effective, least expensive* way to manage diarrhoeal dehydration

To prevent too much liquid being lost from the child's body, an effective oral rehydration solution can be made using ingredients found in almost every household. One of these drinks should be given to the child every time a watery stool is passed.

Ideally these drinks (preferably those that have been boiled) should contain:

- starches and/or sugars as a source of glucose and energy,
- some sodium and
- preferably some potassium.
- The following traditional remedies make highly effective oral rehydration solutions and are suitable drinks to prevent a child from losing too much liquid during diarrhoea:
  - **Breastmilk**
  - **Gruels** (diluted mixtures of cooked cereals and water)
  - **Carrot Soup**
  - **Rice water - congee**
- A very suitable and effective *simple solution* for rehydrating a child can also be made by using salt and sugar, if these ingredients are available.

  If possible, add 1/2 cup *orange juice* or some mashed *banana* to improve the taste and provide some *potassium*.

  Molasses and other forms of raw sugar can be used instead of white sugar, and these contain more potassium than white sugar.

If none of these drinks is available, other alternatives are:

- **Fresh fruit juice**
- **Weak tea**
- **Green coconut water**

If nothing else is available, give

- water from the cleanest possible source
  (if possible brought to the boil and then cooled).
The "Simple Solution"
Preparing a Salt and Sugar Solution at Home

Mix an oral rehydration solution using one of the following recipes; depending on ingredients and container availability:

**Recipe 1**

**Making a 1 (one) litre solution using Salt, Sugar and Water**

**Ingredients:**

- one level teaspoon of salt
- eight level teaspoons of sugar
- one litre of clean drinking or boiled water and then cooled 5 cupfuls (each cup about 200 ml.)

**Preparation Method:**

Stir the mixture till the salt and sugar dissolve.
Recipe 2

Making a 1/2 (half) litre solution using Salt, Sugar and Water

Ingredients:

- a 3 finger pinch of salt (approx. 1.75 gms.)
- a scoop of sugar (approx. 20 gms.)
- 1/2 (half) litre of clean drinking or boiled water
  2.5 cupfuls (each cup about 200 ml.)

Preparation Method:

Pour 1/2 (half) litre of clean drinking or boiled water, after it has cooled, into a large vessel.

Add a 3-finger pinch of salt (approx. 1.75gms).

Taste the solution. It shouldn't be more salty than your tears.

Add a scoop of sugar (approx. 20 gms.)

Stir the mixture till the salt and sugar dissolve.
Recipe 3

Making a quart or litre solution using Sugar or Honey, Salt, Baking Soda, and Water

Ingredients:

- 1 quart or liter of drinking or boiled Water
  5 cupfuls (each cup about 200 ml.)
- 1/4 teaspoon of Salt
- 1/4 teaspoon Baking Soda (bicarbonate of soda).
- 2 tablespoons of Sugar or Honey

Preparation Method:

- Stir the mixture till the salt and sugar dissolve.

Notes: If baking soda is not available, add another 1/4 teaspoon of salt.

Questions on Solutions made at Home

How do I measure the Salt and Sugar?

Different countries and different communities use various methods for measuring the salt and sugar.

Finger pinch and hand measuring, and the use of local teaspoons can be taught successfully.

A plastic measuring spoon is available from Teaching Aids at Low Cost (TALC) with proportions to make up 200 ml of sugar/salt solution.

Whatever method is used, people need to be carefully instructed in how to mix and use the solutions.

Do not use too much salt. If the solution has too much salt the child may refuse to drink it. Also, too much salt can, in extreme cases, cause convulsions. Too little salt does no harm but is less effective in preventing dehydration.

A rough guide to the amount of salt is that the solution should taste no saltier than tears.
How much solution do I feed?

Feed after every loose motion.

Adults and large children should drink at least 3 quarts or liters of ORS a day until they are well.

Each Feeding:

- **For a child under the age of two**
  Between a quarter and a half of a large cup
- **For older children**
  Between a half and a whole large cup
- **For Severe Dehydration:**
  Drink sips of the ORS (or give the ORS solution to the conscious dehydrated person) every 5 minutes until urination becomes normal. (It's normal to urinate four or five times a day.)

How do I feed the solution?

- Give it slowly, preferably with a teaspoon.
- If the child vomits it, give it again.

The drink should be given from a cup (feeding bottles are difficult to clean properly). Remember to feed sips of the liquid slowly.

What if the child vomits?

If the child vomits, wait for ten minutes and then begin again. Continue to try to feed the drink to the child slowly, small sips at a time.

The body will retain some of the fluids and salts needed even though there is vomiting.

For how long do I feed the liquids?

Extra liquids should be given until the diarrhoea has stopped. This will usually take between three and five days.

How do I store the ORS solution?

Store the liquid in a cool place. Chilling the ORS may help. If the child still needs ORS after 24 hours, make a fresh solution.
10 Things you should know about Rehydrating a child.

- Wash your hands with soap and water before preparing solution.
- Prepare a solution, in a clean pot, by mixing
  - one teaspoon salt and 8 teaspoons sugar
  - or
  - 1 packet of Oral Rehydration Salts (ORS)
  - with one litre of clean drinking or boiled water (after cooled)

Stir the mixture till all the contents dissolve.

- Wash your hands and the baby's hands with soap and water before feeding solution.
- Give the sick child as much of the solution as it needs, in small amounts frequently.
- Give child alternately other fluids - such as breast milk and juices.
- Continue to give solids if child is four months or older.
- If the child still needs ORS after 24 hours, make a fresh solution.
- ORS does not stop diarrhoea. It prevents the body from drying up. The diarrhoea will stop by itself.
- If child vomits, wait ten minutes and give it ORS again. Usually vomiting will stop.
- If diarrhoea increases and /or vomiting persists, take child over to a health clinic.

Footnote:

People often refer to home-prepared oral rehydration solutions as "home-brew." This should be discouraged because the word brew implies:

- either fermenting which in fact is an obstacle to some home-prepared solutions especially those made with rice-powder
- or it implies boiling (as in tea) which, especially with sugar and salt or using packets of ORS, should not be done because it decomposes the sugar, or caramelises.