

Electrolytes Combination Therapy

By

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- **IN SHORT TERM TREATMENT OF ELECTROLYTE REPLACEMENT THERAPY SUCH AS AFTER SURGERY.**
- **THE GLUCOSE AND SALINE SOLUTION IN THE FORM OF INFUSION MAY BE ADEQUATE.**
- **IN CASE OF SEVERE CONDITIONS, SOLUTIONS CONTAINING EXTRA ELECTROLYTES ARE NEEDED.**

Fluid maintenance therapy

- It is used to supply normal requirements of electrolytes for the patients those who are unable to take orally.
- All of the maintenance solutions contains 5 % dextrose.

Fluid maintenance therapy

| Electrolytes | Normal requirements in meq/l |
|--------------|---------------------------------|
| Sodium | 25 - 30 |
| Potassium | 15 – 20 |
| Chloride | 22 |
| Bicarbonate | 20-23 |
| Magnesium | 3 |
| Phosphorous | 3 |

Electrolyte Replacement Therapy

- It is needed for very severe loss of electrolytes and water due to severe vomiting, high fever, wounds due to burns and diarrhoea.
- A solution for rapid initial replacement.
- A solution for subsequent replacement
- The concentration of electrolytes in quick initial replacement .
- Solution is more or less similar to that of extra cellular fluid. Some solutions contain large amount of potassium.

A solution for rapid initial replacement.

| Electrolyte | Normal requirement in meq/lit |
|-------------|----------------------------------|
| Sodium | 130 - 150 |
| Potassium | 4 - 12 |
| Chloride | 98-109 |
| Bicarbonate | 28-55 |
| Magnesium | 3 |
| Calcium | 3-5 |

A solution for subsequent replacement.

| Electrolyte | Normal requirement in meq/lit |
|-------------|-------------------------------|
| Sodium | 130 - 150 |
| Potassium | 4 - 12 |
| Chloride | 98-109 |
| Bicarbonate | 28-55 |
| Magnesium | 3 |
| Calcium | 3-5 |
| Phosphorous | 5 |

Oral rehydration salt

- It contains not less than 90% - not more than 110 % of dextrose.
- The required electrolyte are sodium, potassium, chloride and citrate.
- It can be preferred when there is an excess fluid loss .
- Eg. Diarrhoea and vomiting

Oral rehydration salt

- It is dry homogenous powdered mixture of dextrose, sodium chloride, potassium along with sodium citrate or sodium bicarbonate used for electrolyte replacement therapy after being dissolved in the required quantity of water.

Oral rehydration salt

- It may contain some flavoring agent and sweetening agent but not the artificial sweetening agent.
- It contains some diluents for increase in the flow property.
- Saccharin / aspartame are used as sweetening agent for the pediatric ORS preparation.

Oral rehydration salt

- Saccharin daily intake is not more than 5 mg/kg of weight daily.
- Aspartame intake is 40 mg/kg of body weight daily.
- The preparation contains
 - Sodium chloride - 2.6 g
 - Dextrose anhydrous – 13.5 g

Oral rehydration salt

| Active ingredient | Required Amount in grams |
|----------------------|--------------------------|
| Dextrose monohydrate | 14.85 |
| Potassium Chloride | 1.5 |
| Sodium citrate | 2.9 |
| Water Q.S | 1000ml |

THANK YOU