

PROPER SANITATION IS THE ONLY METHOD TO SUCCESSFULLY BEAT A CHOLERA OR SHIGELLOSIS OUTBREAK!

What to use for disinfection*:

Chlorine product	Hands and skin	Floors, clothes, bedding, equipment.	Body fluids** (Rice Water stool, Diarrhea, Vomit treated in large containers)
	Final concentration: 0.05% active chlorine	Final concentration: 0.5% active chlorine	Final concentration: 2% active chlorine. Wait at least 2 hours before dumping.
Household bleach (5% active)	0.1 liters of bleach to 9.9 liters of water (WRITE: 0.05%)	1 liter of bleach mixed with 10 liters of water (WRITE: 0.5%)	4 liters of bleach mixed with 6 liters of water (WRITE: 2%)
Household bleach (30% active chlorine)	Add 16 grams or 1 tablespoon to 10 liters of water (WRITE: 0.05%)	16 grams or 1 tablespoon to 1 liter of water (WRITE: 0.5%)	64 grams or 4 tablespoons to 1 liter of water (WRITE: 2%)
Calcium hypochlorite powder or chlorine granules (70% active chlorine)	7 grams or 1/2 a tablespoon to 10 liters of water (WRITE: 0.05%)	7 grams or 1/2 a tablespoon to 1 liter of water (WRITE: 0.5%)	28 grams or 2 tablespoons to 1 liter of water (WRITE: 2%)

* ALWAYS label the solutions with a permanent marker.

** Note that if chlorine is limited, body fluids can be treated with a final concentration of 0.5% chlorine, but the fluids must be held and occasionally stirred for at least 6 HOURS before dumping.

Education of Patient Caretaker (Family Member):

Inform the Patient Caretaker of their duties in terms of how the patient waste should be handled, where the bathrooms or latrines are located, where hand washing stations are located, and what food items (including at what time) the family is expected to provide and what food items the treatment center will provide.



**COTS Program
Dietician
Pocket Card**

WHO messages to avoid diarrhea:

- Wash your hands with soap:
 - After using toilets/latrines
 - After disposing of children’s feces
 - Before preparing food
 - Before eating
 - Before feeding children
- Boil or disinfect water with chlorine solution
- Only eat freshly cooked food
- Do not defecate near water sources
- Use latrines and keep them clean
- Peel it, cook it, or leave it

**Food and Water Hospital Policies
(in addition to WHO messages above):**

- ORS should not be stored for more than 6 hours.
- Health care workers should **NOT** handle food or water
- The kitchen should be **SEPERATE** from the hospital; kitchen staff should not handle hospital waste
- Dispose of all unused cooked food if there is no refrigeration (below 10°C)
- All food should be cooked thoroughly to at least 70°C
- Keep raw and cooked foods separately
- A treatment center must have 40-60 liters of clean water per patient per day
- Rice-water stool (diarrheal fluids) and vomitus fluids should be disposed of by the sanitation team

Rules of the Kitchen:

- ORS should NOT be stored for more than 6 hours and should be stored in clean, covered containers until use.
- Health care workers should not handle food or water.
- The kitchen should be separate from the hospital.
- Dispose of all unused cooked food if there is no refrigeration (below 10°C).
- All food should be cooked thoroughly to reach at least 70°C.
- Wash hands thoroughly before and during food preparation.
- Keep raw and cooked foods separately.
- Use safe water.
- Promote breastfeeding exclusively for the first 6 months.

Assessing Nutritional Status:

Measure	Moderate Malnutrition	Severe malnutrition
Symmetrical edema (adults and children)	Not present	Yes (edematous malnutrition—for adults rule out non-nutritional causes)
WFH (children; chart in knowledge base)	-3 ≤ SD ^a < -2 or 70-79%	< -3 SD ^a or <85% (severe wasting)
Height for age (children; chart in knowledge base)	-3 ≤ SD ^a < -2 or 85-89%	< -3 SD ^a or <85% (severe stunting)
MUAC (children)	110-125 mm	<110 mm
BMI (adults)	16 – 16.99	<16 (severe malnutrition)
MUAC (adults)	160-185mm	<160mm (severe wasting)
MUAC (pregnant and lactating women)	170-185mm	<170mm (severe wasting)
BMI (adolescents 10-18)		<5th percentile (severe malnutrition) except in cases of stunting where cut-off is <3rd percentile

a = standard deviation from the mean

b = "mid-upper arm circumference". MUAC should be used for children and adults in screening, surveillance or in an area with large numbers of malnourished patients and low numbers of trained staff, weighing machines or height boards. It is also a good marker for the nutritional status of pregnant women.

c For adolescents and adults (≥10 years old) body mass index (BMI) is recommended as a measure of malnutrition. BMI is the weight (in kilograms) over the height (in meters) squared. $BMI = kg / m^2$

Oral Rehydration solution (ORS):

ORS referred to in the COTS program has generally been 'reduced osmolarity ORS' that is premixed and provided in small packets – this ORS has glucose and salts as the base. However if rice and the required salts are available, rice ORS can be produced at the hospital. Rice ORS can be used, and is debatably preferred, for all situations except with children < 1 yr old (use reduced osmolarity ORS in this case).

Formulation for reduced osmolarity ORS:

Reduced osmolarity ORS*	Grams/ liter
Sodium chloride	26
Glucose, anhydrous	135
Potassium chloride	15
Trisodium citrate, dihydrate	29

* Use clean water and boil mixture for 10 min.

- Commercial STANDARD glucose-based ORS simply requires mixing the packet with the specified volume of clean water described on the packet. No cooking is necessary. Please note that almost all commercial ORS in packets is considered the 'reduced osmolarity ORS.'
- Reduced osmolarity ORS can be produced in the hospital according to the table above. After six hours you must discard any unused ORS.

General directions for making RICE ORS:

- Cook rice and smash it afterwards. Dry rice powder.
- Take 50g or 40g of rice powder and add it to one liter of clean water. Add 50ml of additional water to make up for the boiling loss.
- Add salts: sodium chloride, potassium chloride and citrate (alternatively potassium bicarbonate). The quantities of salts are the same as in the ORS table above (substitute the rice for the glucose).
- Mix the solution thoroughly while heating, and continue to stir it while it boils. Boil it for 10 minutes and then let it cool down to drink.
- You can store ORS for 6 hours. After six hours you must discard any unused ORS.