

## **Frequently Asked Questions Arising from the Introduction of the New Diarrhea Treatment Guidelines**

Zinc supplements are a new treatment for diarrhea to be given always in addition to ORS. Both healthcare workers and caregivers may have questions regarding this treatment. Below are a series of questions that has arisen in the field experience of promoting this new treatment to date.

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**ZINC AND ORS****1. Can I give zinc and ORS at the same time?**

Yes, zinc and ORS can be give at the same time while your child has diarrhea. Zinc is given once a day and can be given with ORS. Give the zinc at a time of day that is easy for you to remember and repeat every day until all zinc tablets are gone. ORS needs to be given throughout the day while your child has loose stools.

**2. Can zinc be added directly to the ORS? Will this work as well?**

The zinc tablet will not be harmed by the ORS and can easily be dispersed in a small amount of ORS after it has been prepared. This is an option for infants in lieu of dispersing the tablet in breastmilk. This is also an option for a child who does not like the taste of zinc or is resistant to tablets and medicines. Zinc should not be added to a large amount of ORS because it is then uncertain if the child will be able to finish the desired quantity to get the full zinc dose per day. 2-3 spoonfuls of prepared ORS are sufficient.

In countries like Egypt, zinc is added to some locally produced ORS. But using the ORS containing zinc does not result in a dose of zinc that is adequate to achieve the benefits observed with daily 20 mg zinc supplements given for 10 to 14 days. Indeed, ORS is usually consumed for an average of two days; and the average quantity consumed by a child with diarrhea is about 400 to 500 ml per day. Therefore, if ORS contains 40 mg of zinc per liter, this means that a child will only consume 16 to 20 mg of zinc per day for two days.

### **3. Should I give less ORS since I am giving zinc?**

No, you should continue to give plenty of ORS, as recommended, even though you are giving zinc. ORS will help to replace fluids lost during diarrhea. Zinc will speed up recovery, and will help the child fight off new episodes of diarrhea in the 2-3 months following treatment. Zinc will also improve appetite and growth.

### **4. Can zinc be promoted instead of ORS?**

Zinc should never be used instead of ORS for the treatment of diarrhea. Zinc supplementation is a new addition to the diarrhea treatment guidelines, not a replacement for ORS. ORS is vital to prevent and treat dehydration. Zinc helps to decrease the duration and severity of the diarrhea, but does not prevent or treat dehydration. The combination of ORS and zinc supplementation in conjunction with continued feeding can prevent and treat dehydration, shorten the duration of the episode, and prevent diarrhea induced malnutrition.

### **LENGTH OF TIME TO USE ZINC**

### **5. Why are zinc tablets recommended after the diarrhea episode has stopped?**

Zinc supplements are recommended for the complete dosing regimen, 10–14 days, because zinc not only treats the diarrhea episode at hand, it also helps to repair the damaged gut mucosa and enhances overall immune function. The recommendation of 10-14 days has been made to ensure that recovery from the diarrhea episode is complete and to improve the health of the child in the 2-3 months following.

When counseling mothers the healthcare worker should emphasize the importance of giving the full 10-14 day dose by telling the mother both the short and long term benefits of zinc including: decreases the number of days of diarrhea, decreases the severity of the diarrhea, helps the child fight off new episodes of diarrhea and pneumonia in the 2-3 months following the full treatment and in that time may help your child grow better and improve appetite.

### **6. Why is a range of 10-14 days given in the recommendation? Is 14 days better than 10 days?**

Trials have included both 10 and 14 day dosing regimens. Although no study has compared the effects of 10 and 14 days of supplementation, both have proven effective in separate clinical trials. 10-14 days of supplementation is needed to achieve the maximum benefit of zinc on enhancing the child's weakened immune function in the 2-3 months following the diarrhea.

A major reason to use the 10-day supplementation at this time is the availability of 10-packs of bubble wrapped tablets. Nutriset, the only supplier of the preferred dispersible 20mg zinc sulfate tablet at this time, only produces the 10-packs because it can do this more cheaply than the 14-packs.

## **VOMITING**

### **7. If my child vomits the zinc should I give another one?**

Yes, try to give the child one more tablet. Wait until he/she is calm again and vomiting stops. Make sure your child is keeping down ORS. When he/she takes ORS with no problems, give the next zinc tablet. If he/she vomits after the second tablet do not give anymore on that day, wait to give the next tablet until the next day. Give zinc again the next day and daily until there are no more tablets in the pack.

### **8.If my child is vomiting other things, like ORS, should I try to give the child zinc?**

No, if your child is vomiting ORS and all food and other liquids you should bring him/her to the health center.

## **SIDE EFFECTS**

### **9. What are the side effects of zinc supplementation?**

The only reported side effect of zinc supplementation is vomiting. Vomiting is not reported often and when reported is typically very minimal. Children with diarrhea often experience vomiting with or without receiving a zinc supplement. Zinc at the low recommended dose of 10-20 mg should not induce vomiting. Well made supplements will mask the metallic zinc taste. Children have accepted the high quality supplements now available from Nutriset very well and they rarely cause vomiting.

### **10.I think tablets are bad for babies, what do I do?**

A: This tablet should be dissolved in breastmilk, ORS, or clean water. When you do that you will make a syrup to give to your baby. Babies like this very much, especially in breastmilk.

### **11. Are vitamins/minerals harmful for my child who has a bad stomach?**

A: No, vitamins and minerals are very important while your child is sick and will help your child get better faster. You should give the zinc to your child even though his stomach is bad.

## **RISK OF OVERDOSING**

### **12. What if my child takes more than one tablet?**

You should keep the tablets away from any children in the house to prevent this from happening. If your child takes too many tablets she will probably vomit

them up. Your child should take 1 per day. One or two extra taken by mistake will likely not hurt your child, but you should come to the clinic and discuss what happened with a healthcare worker, just to be safe.

**13. I give a multivitamin to my child; can I give zinc on top of that?**

Yes, your child is losing a lot of zinc in his stools right now, so giving more than usual zinc is good while he/she is sick. After the diarrhea is over it will help replace lost nutrients. You can continue to give the multivitamin and give the zinc as diarrhea treatment for the full 10/14 days. This will not harm your child.

**14. If a child is already eating zinc fortified food as a regular part of his/her diet, is there a risk of a zinc overdose with 10-20 mg of zinc as a supplement for 10-14 days?**

Zinc fortified foods are becoming more and more available around the world. Although zinc fortified foods may enhance the overall zinc content of the diet, it is rare that zinc fortification would provide more than the RDA of zinc. In addition, during diarrhea zinc is lost at much higher rates than normal in the excess stools, thus more zinc is needed during a diarrhea episode. The recommended zinc dose of 10-20 mg per day is 2 times the RDA and is meant to be a treatment dose for a limited a short period of time. Because of the increased loss during diarrhea and the short 10-14 day dose, the risk of overdosing because of fortified foods and an added zinc supplement is very small. Zinc supplementation should be recommended to all children with diarrhea even if the child is consuming zinc-fortified foods.

**SAFETY OF ZINC SUPPLEMENTS IN HIV INFECTION**

**15. Is zinc supplementation safe in populations where children may be infected with HIV?**

Available data indicate that zinc supplementation is safe for persons with HIV. Although there have been only a few small studies of zinc supplementation in HIV positive persons, none have reported adverse effects and in fact, some benefits were noted including improved weight gain and resistance to opportunistic infections. Preliminary results from a 6-month study of daily zinc supplementation in 100 HIV positive children in South Africa showed no adverse effects. There are no reasons to believe that 10-14 days of zinc therapy for the treatment of diarrhea in children who are HIV positive could cause any adverse effects. All children with diarrhea, regardless of HIV status, should be given zinc supplements for 10-14 days.

**OTHER MEDICINES**

**16. Can zinc be given with other medicines?**

Yes, you can give zinc with other medicines. Only give your child medicines that are prescribed at the clinic or by a community healthcare worker.

### **17. Should I get an antibiotic for the diarrhea?**

Only children with bloody diarrhea need antibiotics. If you have not been given any at this time, your child does not need one. If you start to see blood in your child's stool, bring him/her to a healthcare center for further treatment.

### **PERSISTENT DIARRHEA**

#### **18. What do I do if my child does not get better? Could this be because of the zinc?**

If your child does not improve continue to give the zinc. If your child does not get better that is not because of the zinc, but some other reason. If he/she does not improved in 3 days, come back to the health center. Also, come to the health clinic at any time should he/she show any danger signs.

### **BLOOD IN THE STOOLS**

#### **19. Can I give zinc if my child has blood in the stools?**

Yes, zinc can be given if your child has bloody stools. If your child develops bloody stools, you should come back to the health centre for more medicine. Your child will need an antibiotic.

### **FEEDING**

#### **20. Should I feed my child as usual?**

Yes, continue to feed your child and offer an extra meal each day. If your child will eat more than usual, allow him/her to do that. Increased foods will help him. Do not restrict eating.

#### **21. Should I give breastmilk?**

Yes, allow your baby to breastfeed as much as he/she wants. This might be more than usual and that is good. Allow him/her to eat as many times as she wants for as long as she wants.

#### **22. Does breastmilk cause diarrhea?**

No, breastmilk is not the cause of diarrhea. Keep breastfeeding your child. Breastfeeding can prevent diarrhea. Babies under 6 months of age should get only breastmilk to prevent diarrhea.

**23. Can I still give my child milk?**

A: Yes, if your child already drinks cow's milk, you can keep giving this to him/her. Be sure to also give plenty of ORS and plain clean water as well.

**ARE PRESCRIPTIONS NEEDED FOR ZINC?****24. Do zinc supplements have to be prescribed by a doctor?**

Usually not, but this is a policy decision for each country to make. Zinc is an essential micronutrient and is available for purchase without a prescription in many countries. Although zinc is a nutrient, it will soon be placed on WHO list of essential drugs. This listing will allow it to be included so that it can be included. Zinc supplements for the treatment of diarrhea do not contain any added drugs or medicines and have been shown to be completely safe.

They should be made available at pharmacies and wherever ORS is distributed or sold. Zinc is safe and should be promoted by pharmacists and community healthcare workers who are often consulted before higher level healthcare workers.

**LOCAL ZINC FORMULATIONS****25. Can local zinc formulations be promoted?**

Local formulations of zinc supplements can be promoted in the tablet or syrup form, but the quality of the product must be assessed first to ensure the amount of zinc indicated on the label is present. Although multivitamins which include zinc in the formulation may be abundantly available in some areas, these have not been assessed for the treatment of diarrhea and should not be promoted instead of the current recommendations of daily zinc supplements of 10-20mg for 10-14 days for the treatment of diarrhea.