For Tsunami Survivors and the World

By Rick Carter, Editor-in-Chief
A Procter and Gamble product called PUR is on duty right now in the tsunami-ravaged areas of Sri Lanka and Indonesia. It's a powder that, when mixed with dirty water, makes it drinkable. It sounds like science fiction, but Greg Allgood, PhD, head of P&G's Children's Safe Drinking Water Program, assures me it's real science and really works. He recently returned from Sri Lanka where he distributed packets of PUR at refugee camps and taught people displaced by the tsunami how to use it. He preceded two planeloads of the product that were on their way from P&G's manufacturing facility in Karachi, Pakistan, where PUR is made. Introduced in 2003, the product has helped thousands in the Sudan, the Caribbean, Guatemala and other parts of the developing world, but has received little notice.
Allgood calls PUR a "mini water-treatment plant in a little package." Each 4-gram PUR sachet is the size of a disposable ketchup packet, and will treat 10 liters (2.5 gal.) of water. A coagulation, flocculation and disinfection product, it's made of iron sulfate, calcium hypochlorite, a polymer and clay. PUR is unique among water-purification techniques in that it creates clear, potable water.
"You open a sachet pour it into 10 liters of water, and stir for five minutes," says Allgood. "Then you see the flocculent form." A flocculant is a compound that draws suspended particles together. "It attracts all the dirt and bacteria, which then falls out of solution. People can see the water getting clearer literally within minutes after beginning to stir it." Allgood says this is a significant advantage over boiling, which does not remove dirt particles or organisms, and adding bleach, which creates a disinfected but unpalatable mix. After stirring, the user filters the water, waits 20 minutes for the disinfectant to work, then the water is safe for drinking. The product kills pathogenic bacteria and viruses, and the floc removes parasites, which are chlorine-resistant, says Allgood. It does not remove salt, fluoride or nitrates, but does remove heavy metals and pesticides.
Developed by the Cincinnati-based Procter and Gamble Health Sciences Institute, PUR (not to be confused with a dissimilar P&G household product of the same name) continues to flow into the tsunami region. The company's Karachi facility is running around the clock to meet demand. I ask Allgood if he thinks PUR could bring a dramatic change for good in much of the world.
"We know that when people use it, it reduces diarrheal illness by 50%," he says. "And 4,000 children die each day from diarrheal disease related to drinking unsafe water. So in the next several years, we won't reach the whole world, but everywhere we do reach, there is a tremendous potential to save lives."
Hats off to this effort.

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