

# Lifting Families off the Floor

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ABOVE: In March, Nancy Hughes traveled to El Salvador to bring fuel-efficient stoves like the model behind her to families in need.

**Nancy Hughes, founder of StoveTeam International, brings fuel-efficient stoves to Central American families to promote better health**

Many people in Central America cook their meals over indoor fire pits, which sit on the floors inside their unventilated homes. Women, often carrying babies on their backs, cook for an average of six hours per day in excessive smoke. The smoke produces twice the amount of carbon monoxide that health officials consider threatening, which causes eye infections and respiratory illnesses in those who inhale the deadly toxin. Children at play often fall onto the open-fire pits and acquire serious burns.

Sixty-five-year-old Nancy Hughes, founder of StoveTeam International, is determined to prevent these types of injuries and to improve the health of Central America's rural population. The StoveTeam's smoke-free, fuel-efficient stoves are miracles for rural families. The group's next destination is El Salvador, where its members will demonstrate stoves, work on expanding their factory's capacity, and evaluate the effectiveness of their activities.

## What is StoveTeam International?

It is a project to bring fuel-efficient stoves to poor families in Central America, where the major cause of death among women and children is smoke inhalation from indoor fire pits. These open fires are sometimes called "three stone fires" and are quite common throughout the world. The fires cause burns, upper-respiratory diseases, eye problems, and contribute to poor health.

## What motivated you to establish StoveTeam International?

I worked in the kitchen with Cascade Medical Team in Solola, Guatemala in the spring of 2004. One evening, a patient came into the kitchen of the public hospital where we were working. This beautiful, eighteen-year-old indigenous woman had fallen onto a kitchen fire at age two and lost the use of her hands. Her burned hands had grown to be bent backwards, with her fingers reaching her wrists. For sixteen years she had prayed to use her hands. It was at that point when I thought, I need to do something to prevent burns rather than treat them. When I returned to Eugene, I asked Southtowne Rotary Club about sponsoring a grant to provide safer, fuel-efficient stoves to the people in Central America. They encouraged me to write a grant, and I not only wrote that grant but also went on to write grants to Carlos Santana's Milagro Foundation and Synchronicity Foundation.

## Who are the members of your team, and how did you gather them?

There are seven full-time volunteers in Oregon who coordinate the activities. Most of us are retired. One is a practicing certified public accountant, one is a part-time substitute teacher, one sells educational software, and all of us are members of Eugene Southtowne Rotary Club. The members of the teams come from all over the US and Canada.

Most of the volunteers found out about our project from Rotary International, by checking our website or talking to members of previous teams. Many have listened to the speeches I've given throughout California, Washington, Oregon and Idaho. I have even given speeches in South Africa and Bahrain, although we haven't had volunteers from there yet.

## What are StoveTeam International's main activities?

We set up small factories in Central America, which produce portable, affordable and fuel-efficient stoves that reduce deforestation and contribute to better health. Local

people suffer from burns, upper-respiratory infections and hernias when cooking over indoor fire pits. Hernias are caused when people carry heavy loads of fuel wood. Women and small children carry up to 100 pounds of fuel wood on their heads every day.

We are taking between 10 and 30 volunteers to Central America every three months because the work is escalating. The current need in El Salvador alone is for approximately 1 million stoves. We also have requests from Honduras, Guatemala and Nicaragua.

Each volunteer pays \$1,600 for the trip, including flights, accommodations, and transportation within the country. It is a chance to see how most people in Central America live, and many volunteers find that the experience changes their lives. One of our volunteers is there now, helping to build a new factory, and this is his third trip this year.

## Can you explain more about the stoves?

The stove is made of a thin shell of ferro-cement, with pumice as insulation. The combustion chamber is made of baldosa, or what one might call Mexican floor tile. The plancha, or comal, is made of steel and the remaining metal parts are made of rebar or flat-bar. All pieces are manufactured in El Salvador and all materials are available on site. The entire stove weighs less than 40 pounds, so it can be easily carried from place to place. Our factory is currently producing 300 stoves per month, and we hope to increase to 1,000 per month by the end of the year. At the moment, we have a factory in Sonsonate and a factory being constructed in Suchitoto.

## What kind of process must families complete in order to receive their stoves?

We are invited by churches, Habitat for Humanity, Peace Corps, FIASA and Engineers Without Borders to demonstrate our stoves to communities. We have about twenty stoves with us at a demonstration. Individuals are then given the opportunity to buy them or order them.

The total price of a stove is \$40, but grants cover \$20, so the buyer's cost is \$20, which is the amount they would normally pay for wood. Our stoves save that additional wood, and it ends up costing the people no more than they would ordinarily pay. The money is collected in payments of \$5 a month for four months. This keeps us from developing a "hand-out mentality," as people take

pride in being able to purchase a good stove. The Peace Corps, for example, comes to our factories to pick up any additional orders for stoves. We currently have two factories in El Salvador. Nothing has to be imported from the U.S. except a few tools. Everything is there, all ready for local people, and we employ local people to do the work, thus contributing to more employment within the country.

## What are some families' reactions to their new stoves?

On our first demonstration, I heard a woman say, "It's a miracle! There's no smoke." In another example, one woman had five family members who had breathing problems. They started using our stove and she said they were all breathing normally and feeling great after three weeks. People also can't believe how quickly it cooks. It takes only eight minutes to boil a liter of water, so it saves not only wood, but also time.

## What kinds of difficulties have you or your team members faced?

Our biggest problem is in establishing enough factories to keep up with demand. Demand is extremely high, especially in El Salvador. We need to raise additional funds to expand our factory capacity to serve the demand. We also need to get our stoves certified so that they can receive carbon credits.

Most people in El Salvador speak Spanish and most are literate, so we have very few problems in communicating with the indigenous people. In Guatemala it is more challenging, as there are 24 different indigenous languages, so we have to hire double interpreters.

## What changes do you see in the native people's lives and in their health conditions?

I see fewer burns, fewer upper respiratory infections, better general health and an increase in time for small business opportunities. I also have seen less creosote buildup inside the homes. In addition, as women take less time to cook for their families, they have the time to carry the stove outside and sell such things as pupusas (stuffed tortillas) and fried yucca (somewhat like french fries). This brings in extra income and a new sense of purpose. It's empowering for women.

## Is there anything else you want to emphasize to readers?

Just remember that you do not need any special qualifications to make real changes in the world. All you need is a purpose and a passion. **KD**