



Women and young children experience the highest exposures to unhealthy smoke.

Cooking Should Nurture, Not Kill

The Challenge

- Nearly 3 billion people in the developing world cook food and heat their homes using traditional cookstoves or open fires.
- Smoke from these cooking fires leads to high levels of household air pollution; cooking fires also increase the risk of burns, scalds, and household fires.
- 4 million people die prematurely every year due to smoke exposure from traditional cooking fires. This is more than the deaths from malaria, tuberculosis, and HIV/AIDS combined.

How Does This Impact Human/Environmental Health?

- Smoke from traditional stoves contributes to a range of chronic illnesses and acute health impacts, including early childhood pneumonia, emphysema, cataracts, lung cancer, bronchitis, cardiovascular diseases, and low birth weight.
- Traditional cookstoves also create serious environmental health problems—the emissions of black carbon, or common soot, from stoves significantly contribute to outdoor air pollution and climate change.
- Each family using a traditional cookstove can require up to two tons of biomass cooking fuel, and where demand for fuel outstrips the natural regrowth of resources, local land degradation and loss of biodiversity often result.



The Solution: Clean Cookstoves

The use of clean, reliable, affordable, efficient, and safe home cooking practices reduces exposure to household air pollution. Today, clean cooking solutions are readily available. A range of technologies and solutions exist—advanced stoves that burn biomass (unprocessed or processed) or charcoal; cookstoves that burn ultra-clean fuels such as ethanol, biogas, or liquid petroleum gas; and solar cookers, which have no emissions at all. In addition, behavioral and structural solutions can reduce human exposure to cookstove smoke.

- **Chimneys:** Using a well-maintained chimney is a good way to reduce exposure; chimney effectiveness depends largely on maintenance.
- **Ventilation:** Adding ventilation to the kitchen via eaves, spaces, or windows can increase the rate of air circulation through the kitchen and reduce the concentration of smoke in the kitchen. Well-ventilated kitchens can lower indoor air pollution.
- **Cooking Outdoors:** Cooking outdoors lowers concentrations of indoor air pollution. But cooks hovering over the stove, and the babies on their laps or backs, are still exposed while tending the stove.
- **Keeping Children Away from Stoves:** Taking children off their mother's laps or backs during the cooking period and moving them into a cleaner, safer environment can reduce exposure to smoke for very young children who are most vulnerable.

Multiple Impacts of Clean Cookstoves

- **Household livelihoods:** saving time and/or money
- **Fire prevention:** reduced skirt/house fire risk
- **Environment:** reduced deforestation and household air pollution
- **Health:** lower exposure to indoor pollutants improves health outcomes



Credit: The Paradigm Project

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*Key Question:
What can each of us do to rapidly increase the adoption and uptake of cleaner, more efficient cookstoves?*

