Energy Efficiency: A tool for health and a livable Climate

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PHYSICIANS FOR SOCIAL RESPONSIBILITY
What is a medical group doing here?

Energy Efficiency is an essential tool for health:

• In the home
• Outside
• Everywhere! (Climate change)
Health benefits of the Energy-Efficient home: protect from heat, cold...
...from damp, dust, and mold
...from pest infestations & outside air pollutants
Buildings: big energy users, big polluters
Efficient energy USE helps reduce air pollution

By reducing demand for power generation, we can reduce:

• Heart attacks
• Stroke
• Respiratory diseases, from asthma to COPD
• Cancer
Natural gas too

- Burning gas in stoves releases NOx at levels which can harm the lungs of children
- Burning gas in furnaces, water heaters releases NOx, VOCs, etc.
- Pipeline ruptures, fires/explosions
- “Upstream” harms associated with fracking: toxic chemicals, radioactive substances
- Methane leakage: a highly potent driver of climate change
health effects of climate change

Greatest public health threat of the century?

- Heat-related
- Respiratory
- Allergic
- Water-borne/infectious
- Displacement, conflict, migration
- Mental health
Energy efficiency, an important part of the solution

“There’s no cheaper, cleaner power than power you don’t have to produce.”
- Gary Zarker, Seattle City Light
Health benefits of energy efficiency: cleaner air, cleaner water

• Reduced combustion of fossil fuels => Cleaner air => reductions in:
  • heart attacks
  • respiratory diseases, incl asthma, emphysema, chronic bronchitis
  • reduced lung capacity
  • cancer
  • premature birth/low birth weight (infant death)
  • ischemic stroke

• Reduced combustion of fossil fuels => Cleaner water => reductions in:
  • mercury deposition in food chain/fish, causes reduced IQ, mental retardation, impairment of neurodevelopment
  • coal ash, containing deadly metals such as arsenic, lead, mercury, cadmium, chromium, selenium. Can cause various cancers, nervous system damage, death.
  • Toxic chemicals and radioactive wastewater from fracked gas.
Healthy efficient alternatives:
electric heat pump
Healthy efficient alternatives: induction cooktop

- Reduces indoor pollution from stoves
- Uses magnetic energy, heats only the pan
- Fast, precise cooking response
- No burns
Healthy efficient alternatives: Electric vehicles

• EVs are more efficient than gasoline vehicles
• Electricity is less expensive than gasoline
• Efficiency is improving, prices trending down
Energy Efficiency and Health

Energy efficiency is all about using technology and best practices to produce the same or better levels of services, such as light, temperature control, or motor drive power, while using less energy. Very simply, it's about reducing waste.

Energy efficiency and health. Lowering the amount of energy we waste reduces our need to burn coal and other fossil fuels to generate electricity. Those reductions in pollution mean big gains for health, as pollutants from fossil fuel combustion contribute to four of the leading causes of death in the United States: cancer, chronic lower respiratory diseases, heart disease, and stroke. These pollutants damage all the major organ systems in the body.

Respiratory System: Fossil fuel pollutants, particularly fine particulate matter and nitrogen oxides, contribute to serious respiratory health problems including lung cancer, which kills more men and women in the US than any other form of cancer; COPD (chronic obstructive pulmonary disease); and asthma.

Health Effects of Fossil Fuel Pollutants

A big bang for your buck. Technology upgrades to improve the way your home, building, or business functions typically require some up-front investment. Investments in new systems, better lighting, and insulation lower utility bills, and cut health costs.
PSR engages health professionals

Workbook 1: Energy Efficiency

Introduction
Energy efficiency is the cornerstone of My Green Doctor. This is where a doctor's patient care, and rarely with consideration for the cost of office operation and the environment.

The word “energy” was coined by Aristotle, the 4C BCE Greek philosopher. He believed that energy was the driving force behind all natural phenomena.

There are two key tenants to remember as you approach this topic: first, the immediate action you can take to save energy, and second, the long-term benefits of transitioning to renewable energy sources.

We provide dozens of Action Steps that your office can adopt for lowering your energy bill and the air pollution from the burning of these fuels. Every idea in this Workbook is designed to help you make a tangible difference in your practice and the environment.

Energy Efficiency Action Steps
We offer 50 Energy Efficiency Action Steps and Education Steps for you to implement in your practice. Each step is designed to be easy to implement and have a measurable impact on your energy consumption and carbon footprint.
PSR advocates for HEALTH-PROTECTIVE practices, local, state, & federal Policy
Health professionals are trusted messengers

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