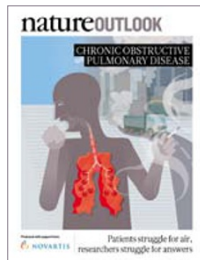


# natureOUTLOOK

## CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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**T**ens of millions of people around the world find it distressingly difficult to breathe owing to a combination of emphysema and chronic asthmatic bronchitis — a deadly duo known as chronic obstructive pulmonary disease (COPD).

Smoking is the most common trigger for COPD, and we have mapped the incidence of smoking and the prevalence of COPD in the United States, a country with fine-grained data on both phenomena (page S2). But there is more to COPD than smoking. Evidence is emerging that some people might be genetically susceptible to the disease (S7), while researchers are picking apart the involvement of errant immune cells (S15).

New treatments for COPD are in development. Hot areas of pursuit involve combinations of agents, as well as novel drug-delivery systems (S16). Most available treatments only abate COPD's debilitating flare-ups. One new line of enquiry is to stimulate the production of antioxidants to neutralize the free radicals that trigger the violent biochemical cascades that lead to the lungs' deterioration (S4). If the damage wrought is irreversible, artificial lungs might be an option (S12). And there are tantalizing early results that suggest that vitamin D supplements can at least slow the lungs' deterioration (S10).

No remedy for COPD will be effective if the condition is not properly diagnosed. Indeed, too often, the disease is mistaken for other, less serious ailments, and the standard doctor's office test is prone to error (S8).

While the decline in smoking in the West should lower the prevalence of COPD, other parts of the world have a rougher road to travel. COPD is expected to grow rapidly in China where tobacco use, smog and smoky cooking stoves portend a future of difficult breathing (S18).

We acknowledge the financial support of Novartis Pharma AG in producing this Outlook. As always, *Nature* has full responsibility for all editorial content.

**Herb Brody**  
*Supplements Editor*

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