

individual. Galko and Krasnow³ highlight the many differences that exist even between epithelial repair in fly larvae and mammalian tissue. However, there are also similarities—the formation of a clot, the subsequent migration of cells through this plug, and the recruitment of inflammatory cells to the wound site—common to both processes. Galko and Krasnow use these similarities to infer that wound healing could have developed at an early stage in the evolution of multicellular organisms, which makes the *Drosophila* larvae model relevant for understanding the genetics of wound healing. That we are now approaching an understanding of how wounds heal at a genetic level marks the rapid evolution of wound healing as a scientific activity; 10 years ago there was little evidence for why wounds heal, let alone which interventions were effective. There are still large gaps in our knowledge of wound care, but underlying mechanisms at the genetic, molecular, and cellular levels are being explored.^{4–8}

While we begin to understand some of the mechanisms of wound healing, the key question of what makes some wounds fail to heal is unanswered. There are no accepted models of a chronic wound and it seems unlikely that part re-epithelialisation in a fly larvae model resolves this issue. Without an accepted animal model to represent the environment of a chronic wound, such as a severe pressure ulcer, understanding the mechanisms that act to delay healing could remain tantalisingly out of reach. Given this lack of understanding, there is little help at present to guide clinicians as to which patients and what wounds would best

benefit from the use of the increasingly sophisticated (and expensive) wound interventions that are becoming available. Understanding why some chronic wounds fail to heal and addressing the causes probably remains some time away, but with the increasing knowledge of the fundamental aspects of wound healing that can be gained from simple systems, such as the *Drosophila* larvae model, there could yet come a time when chronic-wound healing becomes a true science rather than a clinical art.

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The marketing of asthma and allergies

WHO estimates that asthma, a chronic illness that often requires sustained treatment over decades,¹ affects 150 million people worldwide. Chronic conditions, such as asthma, force patients and their families to continuously adhere to recommendations and to try to cope without a real chance for cure. Furthermore, members of the medical and paramedical professions urge these families to seek healthy environments. Many national and international guidelines recommend different strategies for allergen avoidance.

Recently, Michael Cabana and colleagues² compared parental efforts to change their asthmatic children's environment with current recommendations from the National Heart Lung and Blood Institute. They found that most parental actions (58%) are not endorsed by National Heart Lung and Blood Institute guidelines, and that more than half of these approaches do not help control reported environmental triggers.² For example, parents bought special air filters or cleaned their homes excessively, although the child's triggers did not justify these actions.

These results should embarrass the medical profession. Have health-care providers done their best to improve

asthma management by creating and disseminating such guidelines? Worse, studies show that in affluent countries with excellent access to health care, recommendations are not followed for the best medications for asthma.^{3–5} What is wrong? How can we evaluate asthma guidelines' effectiveness and modify our approach?

Asthma's complexities are poorly understood. Ignorance of risk factors and biological mechanisms, and difficulty evaluating a person's progression or remission lead to argument and confusion. Novel research tools, such as genetic testing for asthma susceptibility, yield vastly conflicting results^{6–8} and push the academic world farther away from experts in the field. Practical application of complex and fragmentary knowledge is still far in the future. Such uncertainty often calls for simple remedies.

The internet has made marketing of simple solutions easy. There are about 424 000 sites offering advice for allergy prevention alone. The quality of information varies. Excellent educational sites compete for attention with sites that promise simple cures. The products advertised on the internet may or may not decrease exposure to a particular al-

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The enchanting Sphinx

Contrary to widespread belief, this furless cat is not hypoallergenic.⁹

lergen,⁹ but purchasing them will diminish one's bank account. The time parents spend looking at advertisements usually exceeds the time they spend discussing their children's health problems with physicians.¹⁰

People with asthma may turn away from the medical profession because they do not trust physicians, or they are anxious about pharmaceutical or genetic engineering solutions that seem unnatural, or they simply do not comply. People often act, just to cope with uncontrollable conditions and to feel they are doing all they can. But what really helps?

Perceptions have changed in the past few decades about environmental influences, such as pet keeping, cleanliness, infections, nutrition, and air pollution. Experts have also changed their opinions about the role of allergen exposure in the inception of childhood asthma. While exposure was long perceived as a risk factor, exposures might have no effect,^{11,12} and they might even protect against allergies.^{13,14} Changes in guidelines for primary prevention must reflect new ideas, but we must base our recommendations on solid evidence. We might have to admit we do not know the appropriate primary prevention strategy for asthma and allergies. Investigators are also questioning the use and cost-effectiveness of secondary and tertiary prevention strategies.¹⁵⁻¹⁹

Other aspects of medicine should also be questioned. Clinicians focus on preventing deaths and reducing morbidity while patients often are concerned about quality of life.²⁰ Do health-care providers listen to their patients? Do they adjust their advice and treatment based on patients' individual needs²¹ and treatments' real-world effectiveness?²² Are physicians' and patients' ideas of asthma management the same? Are we truly prepared to endorse strategies to reduce

well-established risk factors, such as passive and active smoking among individuals and in society? Many factors contribute to the marketing success of baseless treatments and cures for asthma and allergies, not just patients' naivety.

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