

SMART HEALTH CHOICES

making sense of health advice



**Professor Les Irwig, Judy Irwig,
Dr Lyndal Trevena, Melissa Sweet**

Smart Health Choices

*In loving memory of Andre Joffe
1964–1999
He touched the lives of so many people
In so many extraordinary ways*

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Professor Les Irwig
Judy Irwig
Dr Lyndal Trevena
Melissa Sweet

Cartoons by Ron Tandberg



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About the authors

Les Irwig MB BCH, PhD is an internationally renowned expert on evidence-based medicine. Professor of Epidemiology at the University of Sydney, he has published widely in international medical journals. He is frequently invited to review evidence for the development of clinical guidelines and to serve on committees developing health policies. Professor Irwig has developed programmes to teach medical students and medical practitioners how to assess research and make health decisions. For this work, he received an Excellence in Teaching Award at the University of Sydney. He has also run courses to help journalists and the public understand how to interpret and use health information.

Judy Irwig has devoted a large part of her career to writing and recording songs for children, conveying important messages about relationships, self-respect and respect for the environment. She brings to this partnership the perspective of a healthcare consumer. Her non-medical background allows her to explain ideas clearly without resorting to technical jargon or making assumptions that often come from years of professional training

Lyndal Trevena MB BS(HONS), PhD is a general practitioner and a Senior Lecturer in the School of Public Health at the University of Sydney. She is interested in making evidence-based practice more feasible for busy clinicians and their patients, and ensuring that good quality information is at hand for making decisions with individual patients. Information about her research and other publications can be found at www.medfac.usyd.edu.au/people/academics/profiles/lyndalt.php. Information about her practice can be found at www.gpcremorne.com.au. Decision aids and resources can be found at www.health.usyd.edu.au/shdg.

Melissa Sweet is an Australian writer and journalist, who has been reporting on health and medical issues for more than 15 years.

Before you read this book

We have designed this book to cover a range of health interests. It is easiest to read at the start and becomes more complex as it progresses. Depending on your needs and level of knowledge, you may choose the appropriate parts or chapters without necessarily reading from cover to cover.

Part I: Health advice can be harmful gives an introduction to the reasons why health advice may be misleading. It discusses some of the common pitfalls for consumers and health professionals, how to identify meaningful health claims and research, and why it can be unwise to rely on the opinions of the experts.

Part II: Your body, your choice is for you if you feel you have an understanding of the pitfalls in health advice, but need to know how to make better decisions by asking the right questions. It discusses the five key questions (see next page) to help make the best possible health decisions and what to look for when choosing a practitioner.

Parts III–VI are for you if you're satisfied with your decision-making skills but need help in assessing whether your sources of information are reliable.

Part III: Stories and studies introduces the concepts of what features combine to make a good study.

Part IV: Evaluating the evidence deals with which study designs best answer questions such as whether a treatment works or what causes a disease.

Part V: Improving your healthcare explains where and how to find reliable evidence and how to use it, and suggests ways in which consumers can get involved in improving their health and healthcare services.

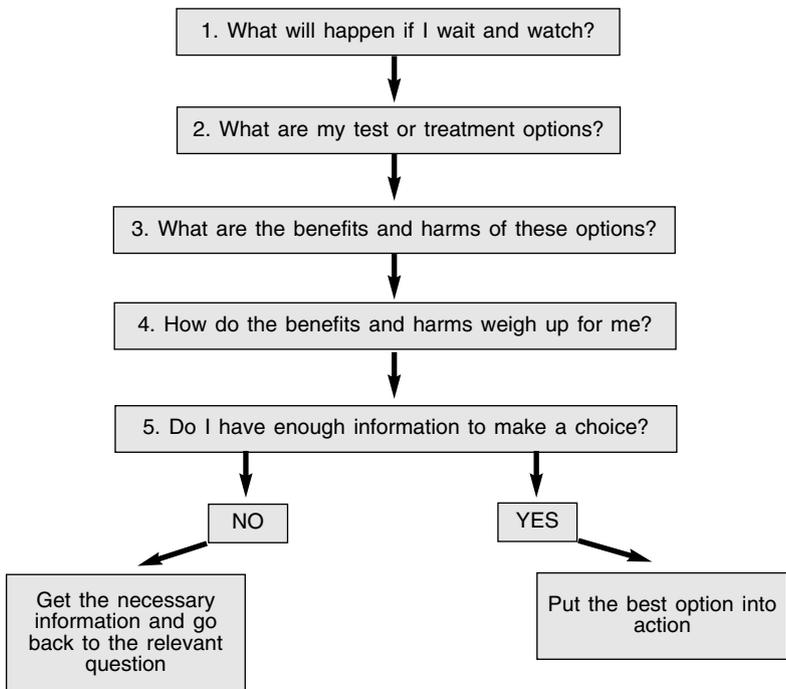
Part VI: Testing your skill starts with an opportunity to practise your skills on a range of articles from the media, internet

BEFORE YOU READ THIS BOOK

and papers in the medical literature. Later chapters are for you if you want a more advanced understanding of numerical concepts underlying health decisions.

There is a glossary at the end of the book.

There are five questions that we suggest you ask when making a smart health choice. They form the core of this book and are covered in detail in Chapter 5. They are:



Acknowledgements

The idea for this book was conceived more than 15 years ago when Judy Irwig began to realise how fortunate she was to have an epidemiologist for a husband. When so many other people that she knew were floundering in a sea of often conflicting and confusing health information, Judy was able to ask Les to help her evaluate health advice. Often, Judy was surprised to discover that health information that was being widely circulated, whether in the media or by friends or even health professionals, was not reliable.

As Judy's skills in appraising health advice developed, she began to think that everyone should have access to the same sort of information that she did. And so she started work on the themes of this book. Judy and Les then invited Melissa Sweet, a journalist who had written widely about evidence-based healthcare and the importance of patients playing an active role in their health decisions, to contribute to the project. The result was *Smart Health Choices: How to make informed health decisions*, published in Australia in 1999 by Allen & Unwin.

When it came time to update the book for this more international edition, Dr Lyndal Trevena, a Sydney GP and academic at the University of Sydney, was the perfect person for the job. Her commitment to evidence-based practice and 20 years' experience as a GP gave her a powerful clinical and academic perspective on the issues so important for smart health choices. 'I try to communicate with my patients about evidence whenever I can,' says Lyndal.

This new edition contains many extra examples and sections. But Les is delighted that the core elements remain the same. 'This suggests that the principles we recommend as important for making smart health choices will be of enduring help,' he says.

The authors are delighted that the Australian cartoonist, Ron Tandberg's work also features in the second edition.

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We also thank those authors and researchers from whose books and studies we have taken examples.

Disclaimer

The decision-making techniques and advice presented in this book represent the opinions of the authors based on their training and experience, and are not intended to replace appropriate consultation with health practitioners. Many of the examples and studies cited may be out of date by the time that you read the book. They are intended to illustrate various principles rather than to be used as a basis for health decisions.

The authors and publishers expressly disclaim any responsibility for any liability, loss or risk, personal or otherwise, that is incurred as a consequence, directly or indirectly, of the use or application of any comments in this book.

The characters in the hypothetical examples and the short story are purely fictitious.

I

Health advice can be
harmful

1

This book could save your life

In the past, information was the real bottleneck, so any improvement in information would lead to an improvement in thinking and in the quality of decisions. Information access and handling (by computers) have widened that bottleneck. So we move on to the next bottleneck. This is ‘thinking’. What do we do with the information?

Edward de Bono¹

Every day we make decisions about our health – some big and some small, some conscious and some subconscious. *What* we eat, *how* we live and even *where* we live can affect our health. We make decisions about where to source information about maintaining good health, as well as about whom to see for treatment when we are ill.

We are bombarded with information about health on a daily basis. ‘Good health’ is highly valued and some people will go to great lengths to achieve it. Sometimes we worry whether we are making the right decisions and we seek assurances that we are receiving the best possible care. We often want answers to questions about a specific health condition. We might wonder about the meaning of certain test results, whether there are other treatment options and, if so, how effective they are. More and more people are also beginning to question whether tests and treatments might have side effects or involve risks.

Public confidence in traditional sources of health care has been understandably shaken in recent years by a number of high-profile hospital scandals and claims of negligence. In the UK, a major enquiry found three heart surgeons guilty of professional misconduct when 29 babies died between 1988 and 1995, more than double the rate in the rest of England.² An enquiry into 29 deaths in Campbelltown and Camden Hospitals in New South Wales in Australia also found mismanagement, poor communication and under-resourcing.

Despite the intense publicity that usually surrounds such cases of medical negligence, these account for a relatively small proportion of the problems with people's health care. A much broader problem arises from the care provided by well-meaning professionals in a system that is so fragmented and complicated that it is all too easy for things to go wrong. It is estimated that as many as 30,000 people die in the UK each year as a result of medical errors³ and that tens of thousands of Australians die or are seriously injured as a result of their healthcare. Seventeen per cent of hospital admissions are associated with an adverse event caused by healthcare management.⁴ In the USA, it has been estimated that about 180,000 people die each year partly as a result of their healthcare – the equivalent of three jumbo jet crashes every 2 days. These figures suggest that there is a great deal of room to improve the healthcare that many people receive.

Some people assume that complementary or 'natural' therapies provide a safer alternative to conventional options. However, there are many examples of people suffering side effects or complications from such therapies, whether from herbal products, acupuncture or chiropractic. In Australia in 2003 hundreds of vitamin and other products had to be recalled after 19 people were hospitalised and 87 reported feeling ill after taking a 'natural' travel sickness pill. Some alternative therapies can also interact with other medicines. Prince Charles sparked debate in May 2006 when he advocated greater access to complementary therapies at the World Health Assembly in Geneva and through the Smallwood report, which was commissioned by him. Some of Britain's leading doctors followed with a letter to NHS trusts urging them to fund only therapies that

were based on scientific evidence. They were particularly concerned about NHS funds being used for homeopathic treatments, given that research has not shown them to be effective and patients were not being told this.⁵ Early in 2007, a £200,000 pilot project of complementary therapies in Northern Ireland general practice had doctors complaining that the limited government health funds could be better spent on breast cancer drugs that have been shown to be effective in scientific studies.

This book will help you to evaluate the potential benefits and harms of various therapies, whether they are part of western medicine or a traditional or complementary practice. When making smart health choices, you should bear in mind what we *don't* know as well as what we *do* know about the pros and cons associated with use.

Although many cases of harm result from human and/or system errors, there are many other ways in which harm can be done. Sometimes, bad things simply happen by chance and are unavoidable. In other cases, they are caused by the well-meaning, but ill-informed, use of treatments and tests that do more harm than good. In addition to this, there are tens of thousands of people who, although not being harmed by their care, are not receiving the best possible treatment for their situation. Studies in many countries have shown that the way the same condition is treated can vary dramatically, depending on where the patient lives or on which type of doctor or health practitioner they see. Much remains unknown about how best to prevent or treat many common conditions; however, there is widespread evidence that the information that is already available is often not put to best use.⁶

This situation has come about for many reasons. Historically, the medical and health professions have not placed sufficient emphasis on the proper evaluation of health practices, although evidence-based practice has become much more common in recent times. Commercial interests, such as pharmaceutical and medical technology companies, often drive the introduction of new practices before their harms and benefits have been carefully investigated. (More about that through the rofecoxib arthritis drug story later.) The media often disseminate misleading and even dangerous health informa-

tion. And consumers themselves often seek out and recommend the use of ineffective and even harmful remedies, perhaps encouraged by misleading advertising, websites or the advice of well-intentioned friends and family.

This book aims to help consumers and practitioners develop the skills to assess health advice – and hopefully to make decisions that will improve the quality of their care. For some people, making better-informed decisions could be life saving. We hope that it will be useful if you are struggling to come to terms with an illness or injury, and the best ways of managing it. Or you may simply want to lead a healthier life, and may be wondering how to make sense of the often conflicting flood of health information that deluges us every day, through the media, and from our friends and health practitioners.

Medicine has a long history of introducing new treatments and other interventions before they have been properly evaluated and proved beneficial. In the late 1950s, American surgeons began introducing a new treatment for people with stomach ulcers that involved freezing the stomach. The first few patients so treated showed a dramatic improvement in ulcer symptoms, and the technique was enthusiastically adopted and used on tens of thousands of ulcer patients. When a proper evaluation was finally conducted, it found that subsequent surgery for ulcers, bleeding from the stomach or hospitalisation for severe pain occurred in 51 per cent of the patients randomly allocated to stomach freezing – compared with 44 per cent of patients randomly allocated to a sham treatment (placebo). (The quality of research is increased by random allocation of patients – for example, by the flip of a coin – to either an active treatment or a placebo treatment, or a comparative treatment.) Needless to say, the stomach freezing procedure was rapidly abandoned, but only after tens of thousands of people with ulcers received the wrong treatment because of insufficient evidence.

Sometimes, the widespread introduction of unproven treatments has had disastrous consequences. In the 1980s, a new treatment for a heart disorder is estimated to have killed tens of thousands of people. This disaster, described by Thomas Moore in his book *Deadly Medicine*,⁷ might have been prevented if the drug, flecainide, had been properly evaluated before its widespread use to control irregular heart-

beats after a heart attack. It might have been prevented if more practitioners and consumers had been prepared to ask ‘What is the evidence to support the use of this new drug?’ The drug was approved for marketing after its manufacturer showed that it stopped several kinds of irregular heartbeats. However, it was introduced before studies had investigated whether this meant that it would also prevent deaths. When this research was finally done, it showed that the treatment had the opposite effect to that expected: it caused deaths.⁸

Unfortunately there are more recent examples of widely used treatments proving to be harmful after more rigorous evaluation has been conducted. Two examples that we will consider in more detail later in this book are the withdrawal of rofecoxib, an anti-inflammatory medicine used for arthritis, which was found to increase the risk of heart attacks and strokes, and the change in use of hormone replacement therapy after the results of a large randomised trial called the Women’s Health Initiative (WHI).

This book is in no way intended as a do-it-yourself guide to becoming your own doctor. It is hoped, however, that it will help you to assess health advice better by showing you how to recognise useful evidence and reject that which is likely to be harmful. Its underlying argument – that we should remain cautious about any intervention that has not been thoroughly investigated and proved to do more good than harm – applies to all health advice, whether it comes from mainstream medicine or complementary/alternative practitioners.

The book is based on the philosophy that consumers have a right to develop a health partnership with their practitioner, so that all decisions take account of their personal preferences, as well as being based on accurate information about the beneficial and harmful effects of interventions. We hope that it will enlighten and empower those who may be feeling disgruntled with their health-care, or who are confused by all the conflicting opinions and information that they are given, or who feel that their practitioners are not taking their viewpoints into account. The book will also be useful to readers making health decisions on their own, without consulting a practitioner.

We believe that the information in this book could have a profound impact on your health by offering simple tools to distin-