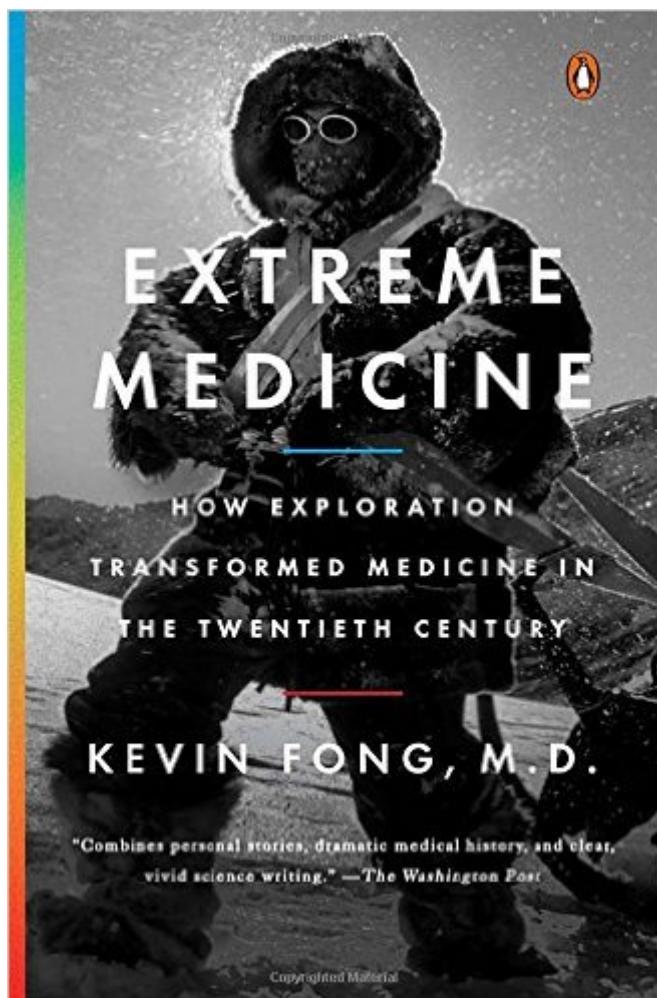


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# Extreme Medicine: How Exploration Transformed Medicine In The Twentieth Century



## Synopsis

Little more than one hundred years ago, maps of the world still boasted white space: places where no human had ever trod. Within a few short decades the most hostile of the world's environments had all been conquered. Likewise, in the twentieth century, medicine transformed human life. Doctors took what was routinely fatal and made it survivable. As modernity brought us ever more into different kinds of extremis, doctors pushed the bounds of medical advances and human endurance. Extreme exploration challenged the body in ways that only the vanguard of science could answer. Doctors, scientists, and explorers all share a defining trait: they push on in the face of grim odds. Because of their extreme exploration we not only understand our physiology better; we have also made enormous strides in the science of healing. Drawing on his own experience as an anesthesiologist, intensive care expert, and NASA adviser, Dr. Kevin Fong examines how cutting-edge medicine pushes the envelope of human survival by studying the human body's response when tested by physical extremes. *Extreme Medicine* explores different limits of endurance and the lens each offers on one of the systems of the body. The challenges of Arctic exploration created opportunities for breakthroughs in open heart surgery; battlefield doctors pioneered techniques for skin grafts, heart surgery, and trauma care; underwater and outer space exploration have revolutionized our understanding of breathing, gravity, and much more. Avant-garde medicine is fundamentally changing our ideas about the nature of life and death. Through astonishing accounts of extraordinary events and pioneering medicine, Fong illustrates the sheer audacity of medical practice at extreme limits, where human life is balanced on a knife's edge. *Extreme Medicine* is a gripping debut about the science of healing, but also about exploration in its broadest sense—and about how, by probing the very limits of our biology, we may ultimately return with a better appreciation of how our bodies work, of what life is, and what it means to be human.

## Book Information

Paperback: 304 pages

Publisher: Penguin Books; Reprint edition (March 31, 2015)

Language: English

ISBN-10: 0143126296

ISBN-13: 978-0143126294

Product Dimensions: 5.3 x 0.8 x 8 inches

Shipping Weight: 8.8 ounces ([View shipping rates and policies](#))

Average Customer Review: 4.4 out of 5 stars [See all reviews](#) (78 customer reviews)

Best Sellers Rank: #57,609 in Books (See Top 100 in Books) #20 in Books > Textbooks > Medicine & Health Sciences > Medicine > Special Topics > History #77 in Books > History > World > Expeditions & Discoveries #80 in Books > Medical Books > History

## Customer Reviews

When you read a blurb, 'How exploration transformed medicine in the twentieth century,' you expect the book to be about "how exploration transformed medicine in the twentieth century!" This book started out in that vein...talking about the death of Robert Falcon Scott in Antarctica...but that was the last time exploration came into this book! I expected to learn about how folks were going into the jungles of the , looking for plants that could cure horrible diseases, or diving in oceans looking for kelp or the toxin of some dangerous fish that could actually help mankind...but it was not to be. It was more a reminiscence of Fong's time as an internist, and recounting of various modern day medical stories. So to begin with I was pretty annoyed that I wasn't getting what I had expected, but to be honest the book as it is, \*is\* pretty interesting. We do learn a great deal about medicine - told in terms a layperson can understand - and about advances in medical care and how the determination of a patient can tip the scales for the better...So I do recommend this book for anyone who is interested in healthcare and medicine and how doctors are helping patients through hypothermia, burn victims...all the way through to what astronauts will have to face on the way to Mars due to the health deterioration caused by weightlessness (as a matter of fact, what astronauts today have gone through - those that have lived on the space station for months at a time.) If you're looking for how exotic plants or animals might help improve medical care, this is not the book for you. If you're looking to learn how doctors have helped people who have suffered extreme health issues due to accident, check it out.

The subtitle of this book is a little misleading; while the medicine described is (or was when it was first developed) extreme, very little of it was actually brought about by exploration. The first chapter, "Ice" starts with the exploration of Antarctica, which did teach us a lot about dealing with extreme cold and hypothermia, which eventually led to the use of hypothermia during radical surgeries and other treatments. "Fire", which tells about the beginnings of plastic surgery and skin grafts, is based in WW 1 and how many pilots were burned beyond recognition when their planes burnt around them in battle. "Trauma" shows us the first ambulance use in the Napoleonic Wars and how the trauma protocol was invented by a doctor who crashed the small

plane he was flying with his family as passengers. Polio led to life support machines and ICU style care- supporting vital systems to give the body time to heal itself. Still, even though the title isn't accurate, it's an interesting book. The author jumps around a lot; it's not a smooth narrative. Sometimes he gives a historical account, sometimes he writes about his own experiences (and he has had a lot of experiences; he got a degree in physics before he turned to medicine and has worked with NASA), sometimes he tells us about what happens to the body in these extreme situations. Those were the parts I found most fascinating, especially in the "Ice" chapter, when he recounts how a skier went hypothermic to the point that her heart stopped, but because she was so cold, brain damage did not occur even though she went three hours without a heartbeat. An interesting book but it wanders a bit.

I enjoyed reading this book and felt I learned about how some areas of medicine have advanced and about the pioneers in the field. The book includes stories about the advent of the ICU in the rush to save polio victims, how horrific war injuries led to advances in plastic surgery, and more. At the same time I felt there were chapters that felt "thin". For example the chapter on aging introduces a remarkable WWI veteran, yet seemed thin to me on explaining what is going on in the aging process. Or, for that matter, once we became interested in the chap, in explaining what happened to him. Overall I'd say its a good book but could have used few chapters in more depth.

I seem to get some deja vu when reading this perhaps because I've read similar books or have seen specials on the same themes. This book basically entails how medical breakthroughs have occurred by necessity due to extremes in temperature, such as the exploration of the South Pole. Much of that from the diary of a dying man stranded and freezing to death with no hope of escape. Then there are the extremes of fire, mostly burn victims and of war, which triggers many extremes, all the way out to the exploration of space and the challenges there. The basic theme is that as man explores and ultimately conquers his limits, medical science moves on. As technology has led to vast new frontiers to explore in the last two centuries, and explosion of medical knowledge has arrived along with it. It has some interesting stories how this came about, but nothing I've not seen before, so unfortunately for me it was an interesting read, but not an eye opening exploration as I had hoped for. Commercially, I think the book will fare better if it is given some significant illustrations. May have been better had author focused on one of the extremes and got some depth to his insights. Mildly recommended for medical history buffs, but probably too dry for most casual readers.

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