

SPECIAL ISSUE

# NATIONAL GEOGRAPHIC

*The cells of a patient's heart, lungs, liver, kidney, brain—you name it—can be replicated on this chip to help researchers develop individualized treatments.*



THE  
FUTURE  
OF

# MEDICINE

HOW NEW TECHNOLOGIES AND ANCIENT REMEDIES  
ARE TRANSFORMING HEALTH CARE

# CONTENTS

## SPECIAL ISSUE: MEDICINE



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### PROOF

#### Home Pharma

Hidden away in the world's bathrooms, closets, and cabinets, pills, syrups, tonics, ointments, and other medicines pile up.

PHOTOGRAPHS BY GABRIELE GALIMBERTI

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### THROUGH THE LENS

#### Doctor Photographer

Choosing between two consuming vocations.

BY MAX AGUILERA-HELLWEG



### INTERVIEW

#### Watch What—and When—You Eat

Timing is everything.

BY MICHAEL ROIZEN AND MICHAEL GRUPAIN

### DATA SHEET

#### Health Care Spending

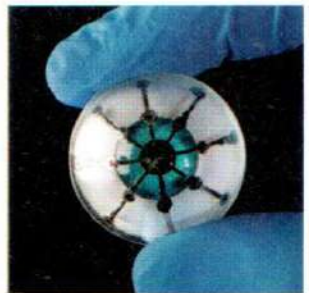
High costs don't always yield better outcomes.

BY ALBERTO LUCAS LÓPEZ AND RYAN T. WILLIAMS

### On the Cover

This composite photo shows highly magnified, functioning spinal cord tissue (background) that's micro-engineered onto a chip, which researchers can use to study disease.

CRAIG CUTLER (HAND WITH CHIP); SAMUEL SANCES, CEDARS-SINAI (BACKGROUND)



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### THE BIG IDEA

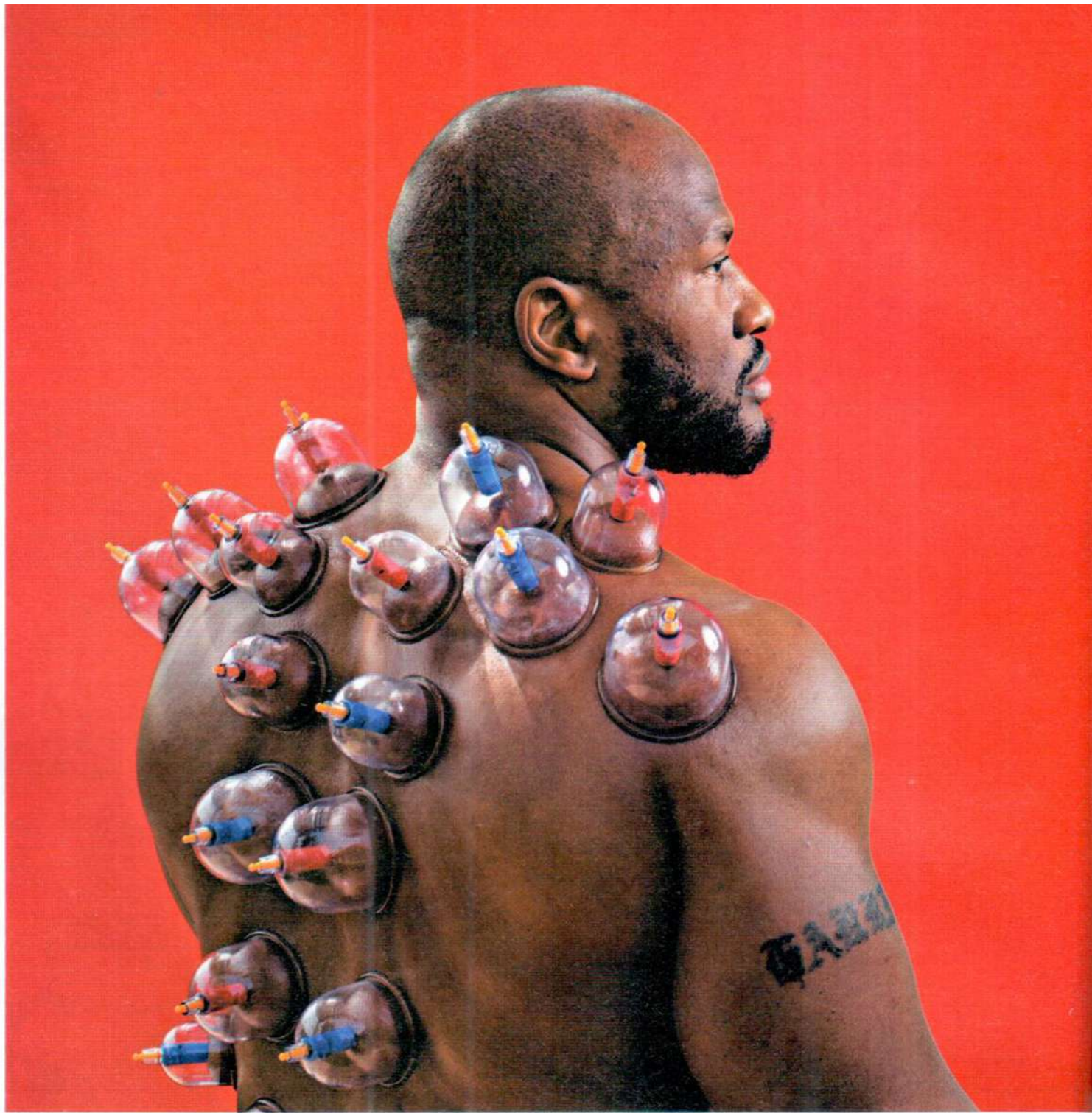
#### The Future of Medicine

Ever present and hyperconnected, the high-tech medical treatments of the future will focus on well-being and prevention.

BY DANIEL KRAFT

### ALSO

- Cutting-Edge Music to Boost Premies' Brains
- Selfies Look for Cancer
- Contact Lenses May Track Glucose Levels
- 3D Printers Manufacture Missing Limbs
- Robot Rehab Coaches



**FEATURES**

**Every Body Is Unique**

Built on stunning advances in gene research and data mining, precision medicine devises treatments tailored to a patient's specific biochemical makeup. This new approach has the potential to upend decades of medical practice.

BY FRAN SMITH  
PHOTOGRAPHS BY  
CRAIG CUTLER

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**The Immortal Corpse**

An elderly woman donated her body to a researcher's ambitious project. He froze it, sliced it 27,000 times, and took pictures. The result: a virtual cadaver that can be examined by medical students and help them understand how, in life, she was put together.

BY CATHY NEWMAN  
PHOTOGRAPHS BY  
LYNN JOHNSON

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**The Secrets of Chinese Medicine**

Modern science examines ancient remedies.

BY PETER GWIN  
PHOTOGRAPHS BY  
FRITZ HOFFMANN

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**The Truth About Maternal Mortality**

Rates are relatively high for American women.

BY RACHEL JONES  
PHOTOGRAPHS BY  
LYNSEY ADDARIO

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