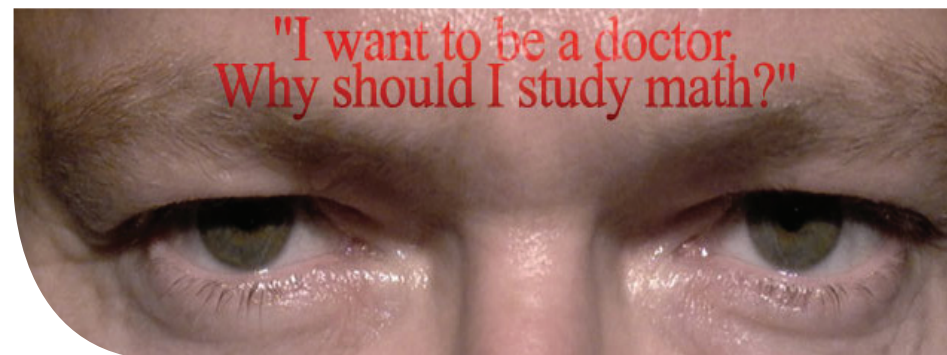


Career Spotlight

Physician

Physicians, or doctors, diagnose illnesses and prescribe and administer treatment for people suffering from injury or disease. Physicians examine patients, obtain medical histories, and order, perform, and interpret diagnostic tests. They counsel patients on diet, hygiene, and preventive health care. Earnings of physicians and surgeons are among the highest of any occupation, and depend on area of specialty and how long the individual has been a physician.



EDUCATION

Becoming a doctor requires more training than most other jobs. It usually takes at least 11 years to become a doctor: 4 years of college, 4 years of medical school, and 3 years working in a hospital. To become a doctor, you should study mathematics, biology, chemistry, physics, and English. Do you love mathematics, but want to pursue a career as a doctor?

“Professional graduate schools in business, law, and medicine think mathematics is a great major because it develops analytical skills and the ability to work in a problem solving environment. And results on admission tests for graduate and professional schools show that students majoring in mathematics receive substantially higher scores than most other majors.”

William Allard & Clark Bray

Duke University, Mathematics Department

WHEN MATH IS USED

Physicians use math in every day practice. For example, they use statistics and probability to interpret tests results. When a patient is treated for an illness, the probability is used to determine which type of treatment to use, if any.

“Evidence-based medicine, the use of statistical models to guide diagnoses and treatment, is already changing how doctors practice.” - Ian Ayres

POTENTIAL EMPLOYERS

Approximately 15 percent of physicians are self-employed. About half of wage-and-salary physicians and surgeons work in offices of physicians, and 18 percent are employed by hospitals. Others practice in Federal, State, and local governments, including colleges, universities, and professional schools; private colleges, universities, and professional schools; and outpatient care centers.

FACTS

Anesthesiologists focus on the care of surgical patients and pain relief. They are responsible for maintenance of the patient’s vital life functions—heart rate, body temperature, blood pressure, breathing—during surgery. They also work outside of the operating room, providing pain relief in the intensive care unit, during labor and delivery, and for those who suffer from chronic pain. Anesthesiology is the specialty where individuals can receive the highest salary as a physician.

CITATIONS

<http://www.bls.gov/oco/ocos074.htm>

<http://www.bls.gov/k12/help06.htm>

<http://www.darton.edu/programs/scimath/programs/p-prephya.php>

<http://www.math.cornell.edu/Courses/FSM/biology.html>

http://wiki.answers.com/Q/Why_does_a_physician_need_to_know_math

MATH REQUIRED

- College Algebra
- Trigonometry
- Calculus I
- Calculus II (useful)
- Linear Algebra (useful)
- Statistics and
- Probability

Low-end Salary: \$55,190/yr

Median Salary: \$187,199/yr

High-end Salary: \$187,199+/yr