Family Doctor

Nancy Haro-Ramirez

About Me

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Nancy Haro-Ramirez

Born and raised in San Bernardino, CA

UC Irvine- 2nd year Bio Major

Chancellor's Excellence Scholarship-great academic standing allows for this award ($2,500)

Mesa Unida- Director of Community Service and Engagement

Middle School

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Spent half of 6th grade in Mexico

　　Adapted to the language
　　and curriculum

Wasn't interested in the sciences but loved English Language Arts

Didn't know what career path I wanted to follow

Eisenhower High School

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1st Place Science Fair Winner- Organic waste paper

   3rd Place in the county

Began to excel in my science courses (Honors Chemistry, AP Bio, physics)

   I knew I wanted to pursue a scientific career

Volunteered at Loma Linda Hospital

   Worked with inspiring scientists in the lab

Currently...

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Taking chemistry and biology courses at UCI

Take chemistry lab classes, which I find amusing

The medical aspects of my bio and chem classes intrigue me

Hope to get an internship or volunteer opportunity at a hospital soon to gain experience

Family Doctor

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Family doctors take care of patients of all ages from infants to elderly

Spend a lot of time interacting with patients

Educate patients on health topics to help prevent illnesses in their lifetime

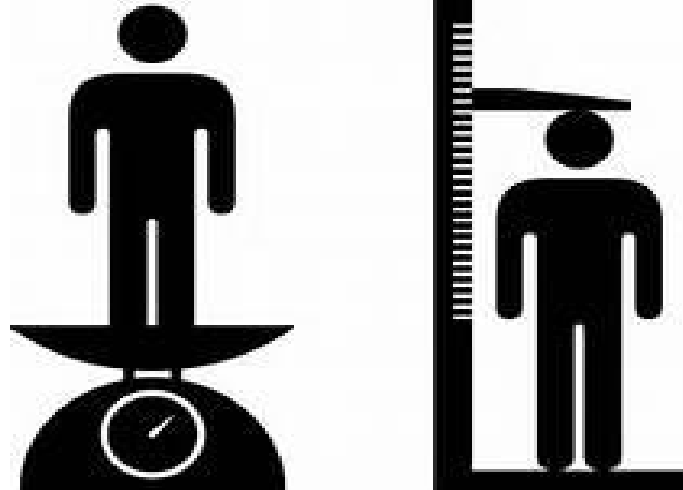# Why does a doctor need to know math?

- Determine what dosage a patient needs according to their weight and height
- Doctors read medical study journals
  - Contain statistical data
  - Need to know how to interpret the data
- Mainly use statistics and algebra
  - Conversions (mg→g)

Determining Body Mass Index using Math

- Body Mass Index (BMI): A measure of body fat based on height and weight used to check if a patient is overweight or obese. If so, the doctor would give nutritional advice and perhaps suggest a diet to make the patient healthy.
- Underweight: <18.5
- Normal: 18.5-24.9
- Overweight: 25-29.9
- Obese: ≥30

BMI Example

A patient weighs 115 lbs and is 5 feet and 7 inches tall. The doctor needs to determine the patient's BMI to determine if the patient is healthy or not.

BMI= [(weight in lbs) x (704.7)] / (height in inches)^2

BMI= (115 lbs x 704.7) / 67^2

=18.0

The Patient lies in the underweight scale (<18.5) so the doctor will provide health guidance to get the patient to a healthier weight.

Schooling- Total of 11 years after High School

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- Begin with pre-med
    - 4 years of fulfilling requirements for a Bachelor degree
    - Pre-reqs for med school
        - Advanced calculus/statistics and English
        - Physics, chemistry, biology
- Medical School
    - 4 year Medical degree (doctorate)
- Residency
    - 3 years in residency program
        - Gaining experience under the supervision of certified doctors
    - Pass board exam to become certified

Salary and Job Growth

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- Reportedly $227,541/ year
- About $90/ hour
- Minimum Wage in CA: $10.50/hr

Job Outlook: 15% increase from 2016-2026 (faster than average)

Thank you for your time!

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- "Physicians and Surgeons - What Do Physicians and Surgeons Do?" *Student Scholarships*, StudentScholarships.org, www.studentscholarships.org/salary/469/physicians_and_surgeons.php#sthash.FmoqzUoP.DtRCUgCY.dpbs.
- "Quick Facts: Physicians and Surgeons." *U.S. Bureau of Labor Statistics*, U.S. Bureau of Labor Statistics, 24 Oct. 2017, www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm."Why Study Math?" *Mathforum.org*, Dr. Math, 1994, mathforum.org/dr.math/faq/faq.why.math.html.