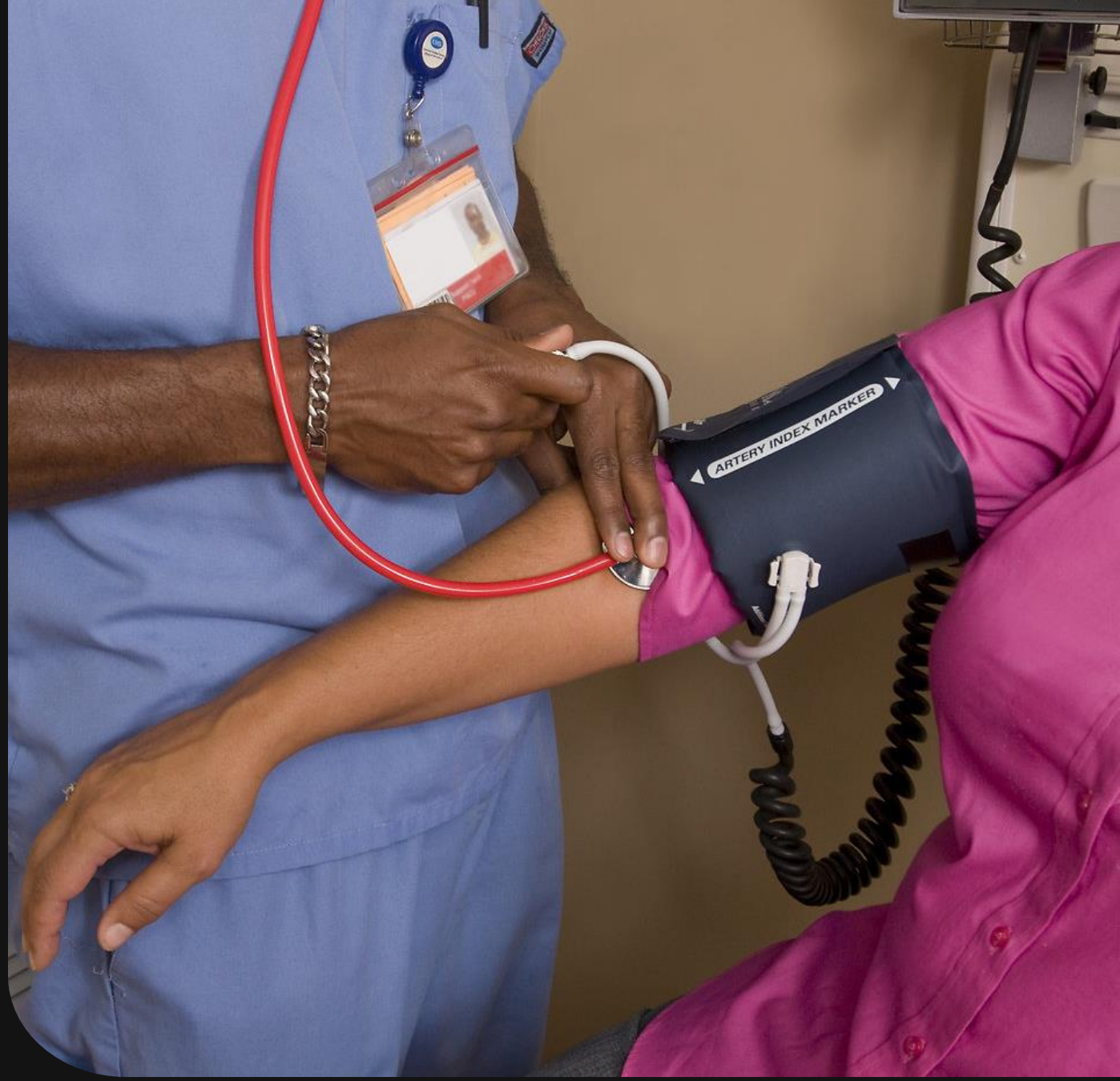
SYSTOLIC PRESSURE



What is systolic pressure? page 382

When blood pressure cannot be determined by auscultation, the palpation method is used to estimate systolic pressure. With the blood pressure cuff in place on the upper arm, palpate the radial artery. Inflate the blood pressure cuff 30 mm Hg above the point at which the radial pulse disappears. Release the valve ad allow mercury to fall 2 mm Hg/second, noting the point on the manometer when the radial pulse is again felt.

❑ Lifespan consideration box

WHAT IS MAP?

- MAP-(Mean Arterial Pressure)- A measure of the average pressure in a person's arteries over a single cardiac cycle. (The average pressure that pushes blood through the body's organs during one complete heartbeat) It is calculated using the formula:
- MAP=(systolic BP + 2 X Diastolic BP) divided by 3.
- This value is crucial for assessing if vital organs are receiving adequate blood flow is widely used in critical care settings to monitor patient status.
- A normal MAP is typically between 70-110 mm Hg

NCLEX STYLE QUESTION

A nurse is assessing a patient with a blood pressure of 110/70 mm Hg. What is the patients mean arterial pressure (MAP)?

A. 70 mm Hg

B. 80 mm Hg

C. 83 mm Hg

D. 90 mm Hg

ANSWER

- Correct Answer C.
- MAP formula:
- MAP= (SBP+2(DBP))/3
- MAP=(110+2(70))/3=(110+140)/3=250/3=83.333

PULSE PRESSURE

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- The difference between the systolic and diastolic blood pressure
- Ex. SBP MINUS DBP....Blood pressure 110/70= 40
- Normal pulse pressure is 40 mm Hg, however varies by individual
- A higher pulse pressure indicated that your arteries are becoming stiffer, Your heart is working harder than it should be. while a lower pulse pressure can mean your heart is not pumping enough blood, your arteries are less flexible than they should be.
- Increased risk: A pulse pressure that is too high or too low can be a predictor of cardiovascular events like a heart attack or stroke.

CAUSES:

High (WIDE) Aging, stiffening of the arteries due to conditions like atherosclerosis, aortic valve regurgitation

Low (NARROW) Heart failure, Aortic stenosis (narrowed valve), severe blood loss.

Pulse Pressure: What It Means & How To Calculate It