PRESSURE

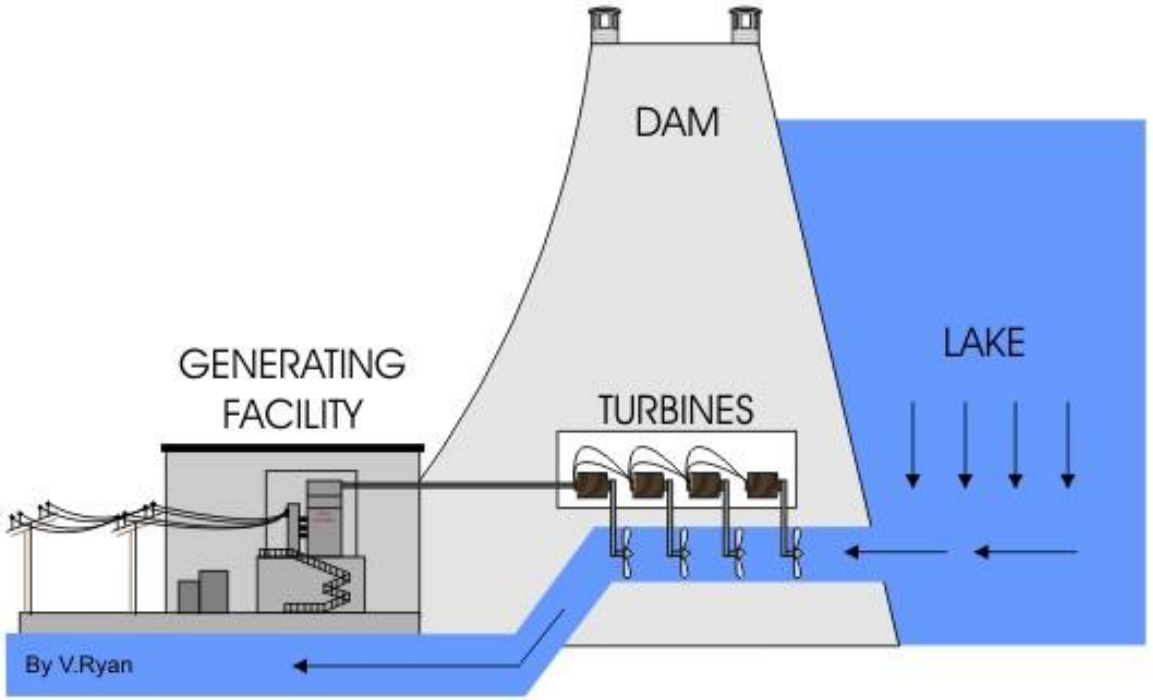
Depends on Force and Area

A


beeboys
shutterstock

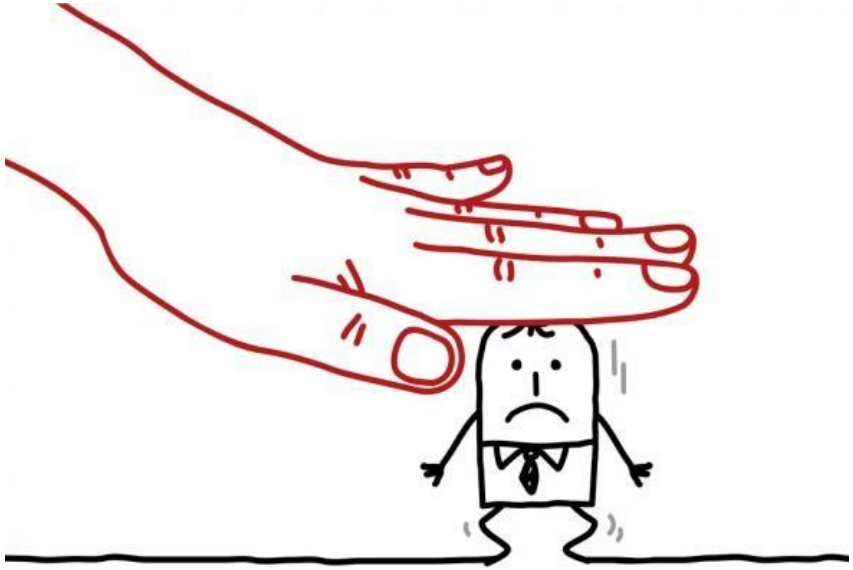
B


beeboys
shutterstock


DAM
LAKE
GENERATING FACILITY
TURBINES
By V.Ryan

What is pressure:

- is the force applied perpendicular to the surface of an object per unit area over which that force is distributed.



Pressure

- Describes how a force is spread over an area.

$$P = F / A$$

Pressure = Force / Area

- It is a measure of how much force is acting on a certain area.

Increasing Pressure

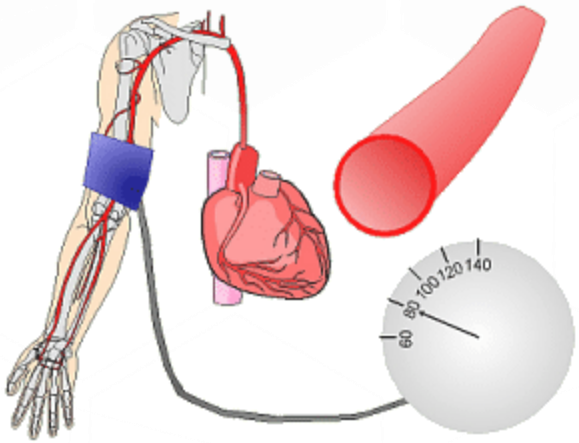
You can increase pressure in two ways:

1. Increase the force

2. Decrease the area of the force

Blood Pressure

Measurement



How can anything so simple

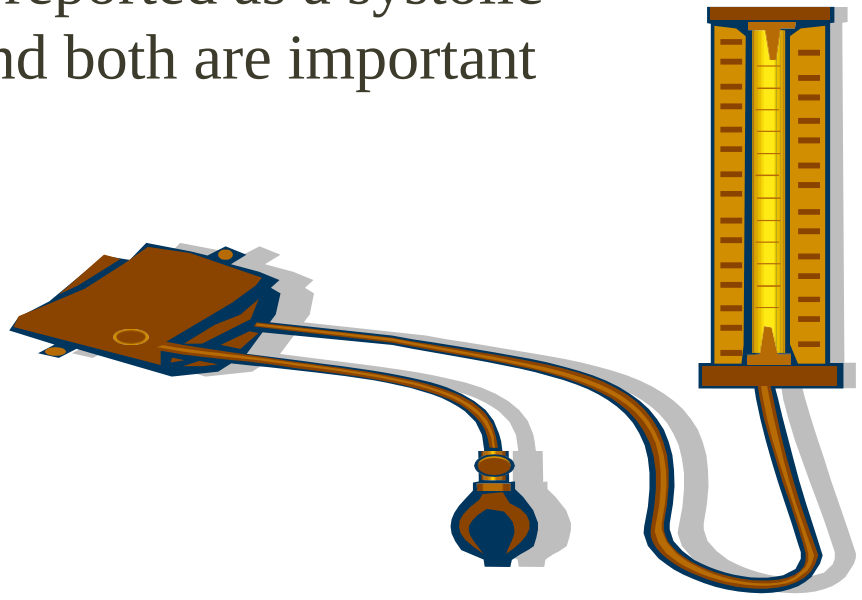
be so complex?

What is blood pressure?

- Blood is pumped from the heart to all parts of the body via arteries
- The blood pressure is the force of the blood pumped against the arteries.
- The BP reading is represented as two numbers
  - The systolic pressure is the pressure when the heart pumps (top number)
  - The diastolic pressure is the pressure when the heart rests (bottom number)

Blood pressure

- Blood pressure changes during the day
- It can rise with stress and emotion
- It is typically lowest during sleep
- Blood pressure is always reported as a systolic and a diastolic number and both are important

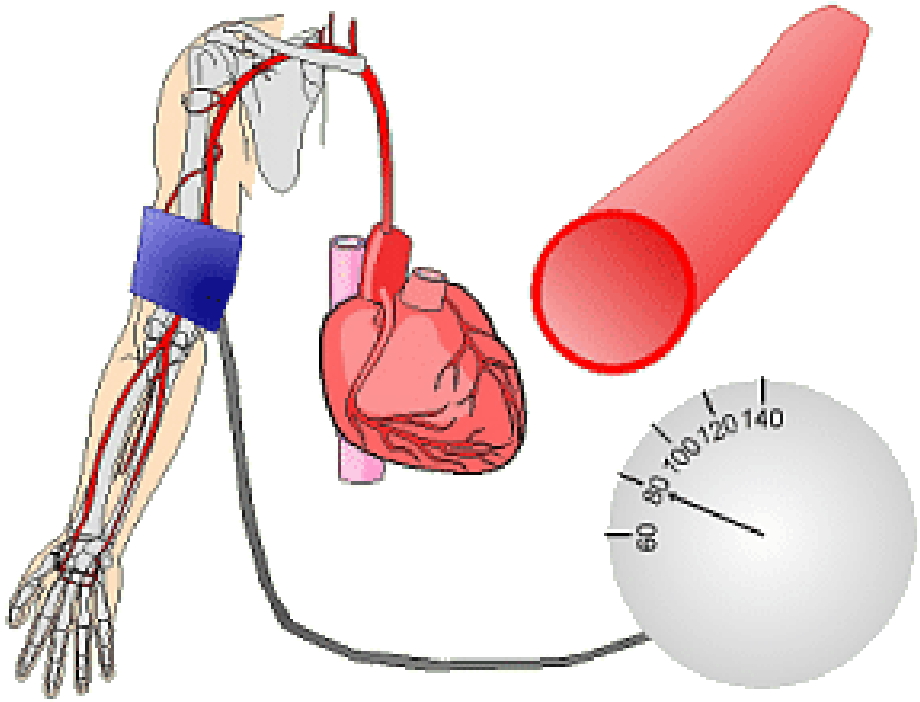


Blood Pressure

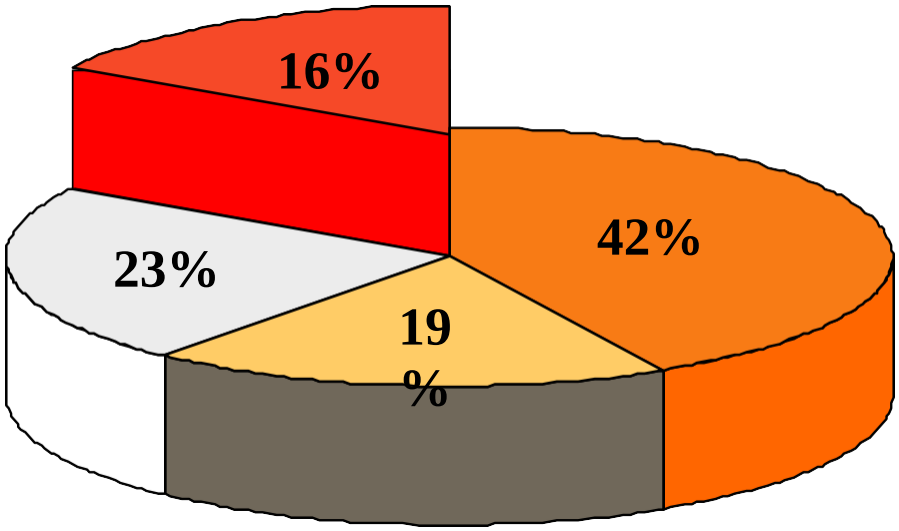
Blood Pressure (BP)

= Cardiac Output (CO) x

Total Peripheral Resistance (TPR)

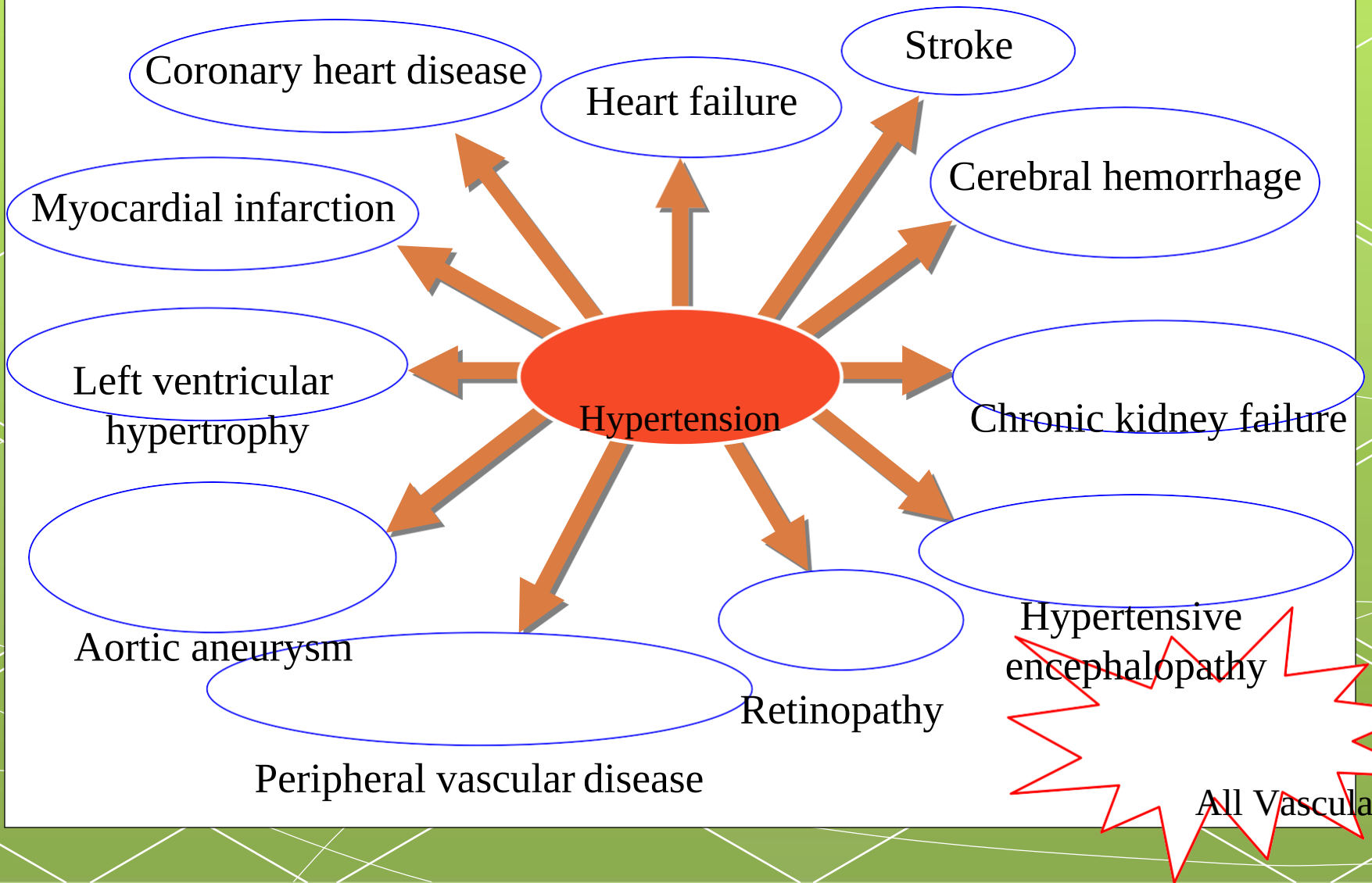


Awareness, Treatment and Control of High Blood Pressure in Canada

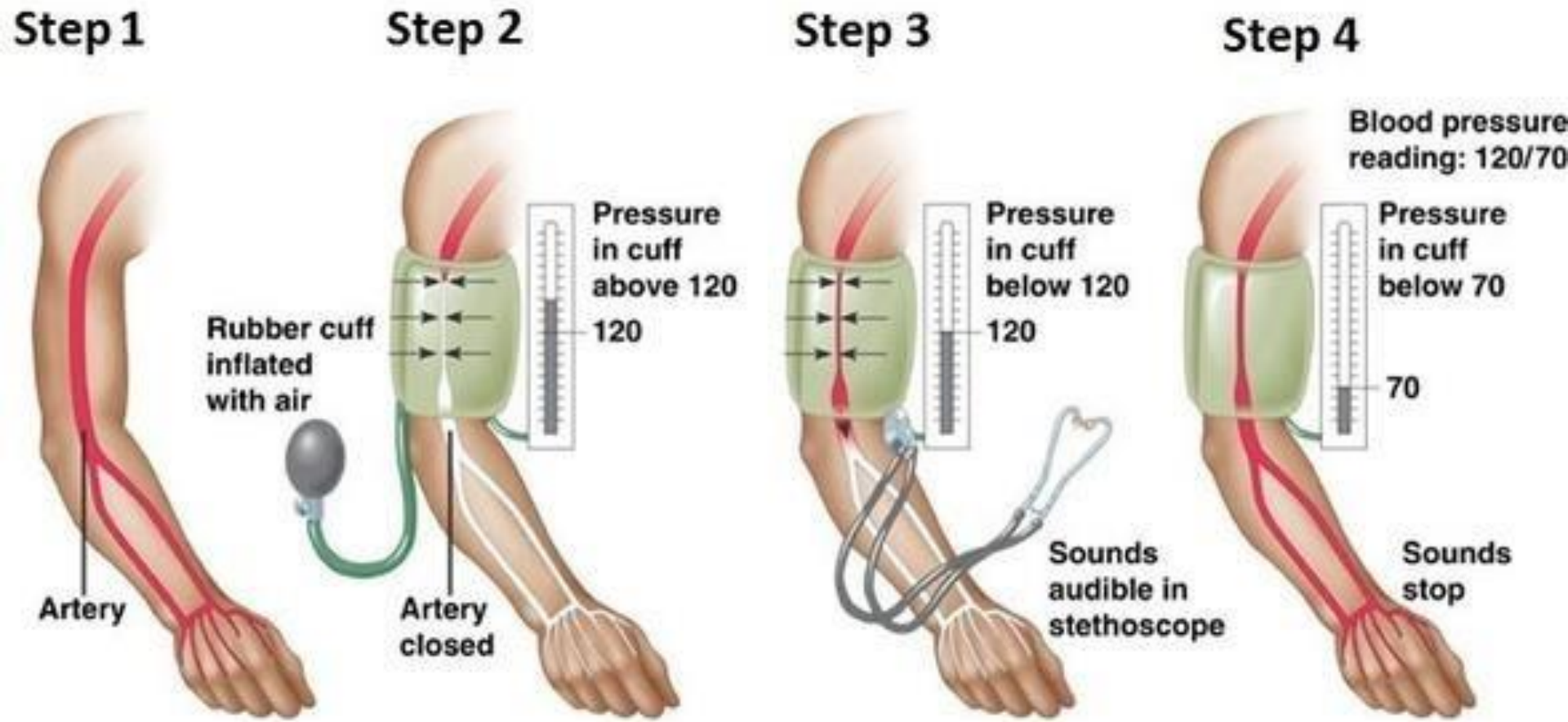


Patients unaware of their high blood pressure		42%
Aware but not treated and not controlled		19%
Treated but not controlled	23%	
Treated and controlled		16%

Diseases Attributable to Hypertension



Measurement of blood pressure




Tycos
PRE-CALIBRATED
ARTERY