



Complications of Hypertension

Hypertension can lead to severe complications if left untreated, affecting multiple organs and systems in the body. Here are the major complications:

1. Cardiovascular Complications

Heart Attack (Myocardial Infarction): High blood pressure can damage arteries, making them more prone to blockages, leading to a heart attack.

Heart Failure: The heart has to work harder to pump against high pressure, leading to thickening of the heart muscle (left ventricular hypertrophy) and eventual heart failure.

Aneurysm: Persistent high pressure can weaken artery walls, causing them to bulge (aneurysm), which may rupture and cause life-threatening bleeding.

2. Brain Complications

Stroke: High blood pressure increases the risk of both ischemic (blocked artery) and hemorrhagic (ruptured artery) strokes.

Cognitive Decline & Dementia: Reduced blood flow to the brain can contribute to vascular dementia and Alzheimer's disease.

Transient Ischemic Attack (TIA): Also called a mini-stroke, this is a temporary blockage of blood flow to the brain, often a warning sign of a future stroke.

3. Kidney Complications (Hypertensive Nephropathy)

Chronic Kidney Disease (CKD): High blood pressure damages kidney arteries, reducing kidney function and leading to kidney failure.

End-Stage Renal Disease (ESRD): Severe hypertension can lead to complete kidney failure, requiring dialysis or a kidney transplant.

4. Eye Complications (Hypertensive Retinopathy)

Vision Loss or Blindness: Damage to the blood vessels in the retina can cause vision problems, including blindness.



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Optic Nerve Damage (Hypertensive Optic Neuropathy): Reduced blood flow to the optic nerve can result in vision loss.

5. Metabolic & Other Complications

Atherosclerosis: Chronic hypertension accelerates plaque buildup in arteries, increasing the risk of blockages.

Sexual Dysfunction: Reduced blood flow can lead to erectile dysfunction in men and decreased libido in women.

Peripheral Artery Disease (PAD): Narrowing of arteries in the legs, leading to pain and poor circulation.

6. Hypertensive Crisis (Medical Emergency)

Hypertensive Urgency: Blood pressure $>180/120$ mmHg without organ damage, requiring immediate treatment.

Hypertensive Emergency: Extremely high blood pressure with organ damage (brain, heart, kidneys), which can be life-threatening.