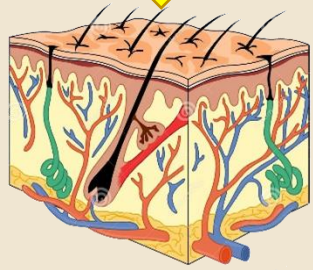
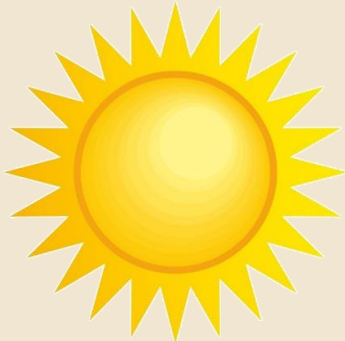


The Body Needs All Forms of Vitamin D



Vitamin D3 made in the skin is used by skin cells that cannot rely on vitamin D from the blood

↓ DNA Damage
Cell Death

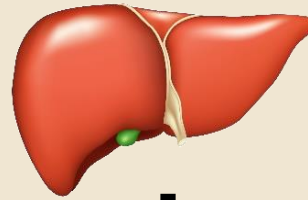
↑ DNA Repair



VITAMIN D3
(Cholecalciferol)



- Taken directly into cells for local conversion and use
 - Most potent form for endothelial stability
 - Anti-inflammatory
 - Form needed by breastfeeding mothers to transfer to baby through breastmilk
- Must receive daily/semi-daily due to very short half-life of roughly 24 hours



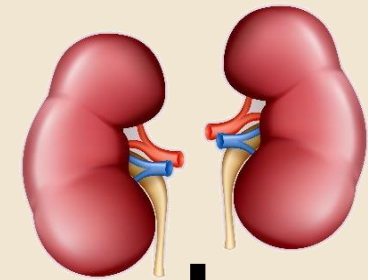
25-hydroxylase



25(OH)D
(Calcifediol)



- Form measured in blood as indicator of vitamin D status
- Taken directly into cells and converted to 1,25(OH)₂D for local use
 - Used as a signaling molecule in most cells and tissues, including immune, brain, blood vessels, heart, lungs, and many more



1 α hydroxylase



1,25(OH)₂D
(Calcitriol)



Hormonal Vitamin D – regulated by parathyroid hormone (PTH) for blood calcium control



Calcium absorption in the gut
Bone turnover
Calcium in the blood