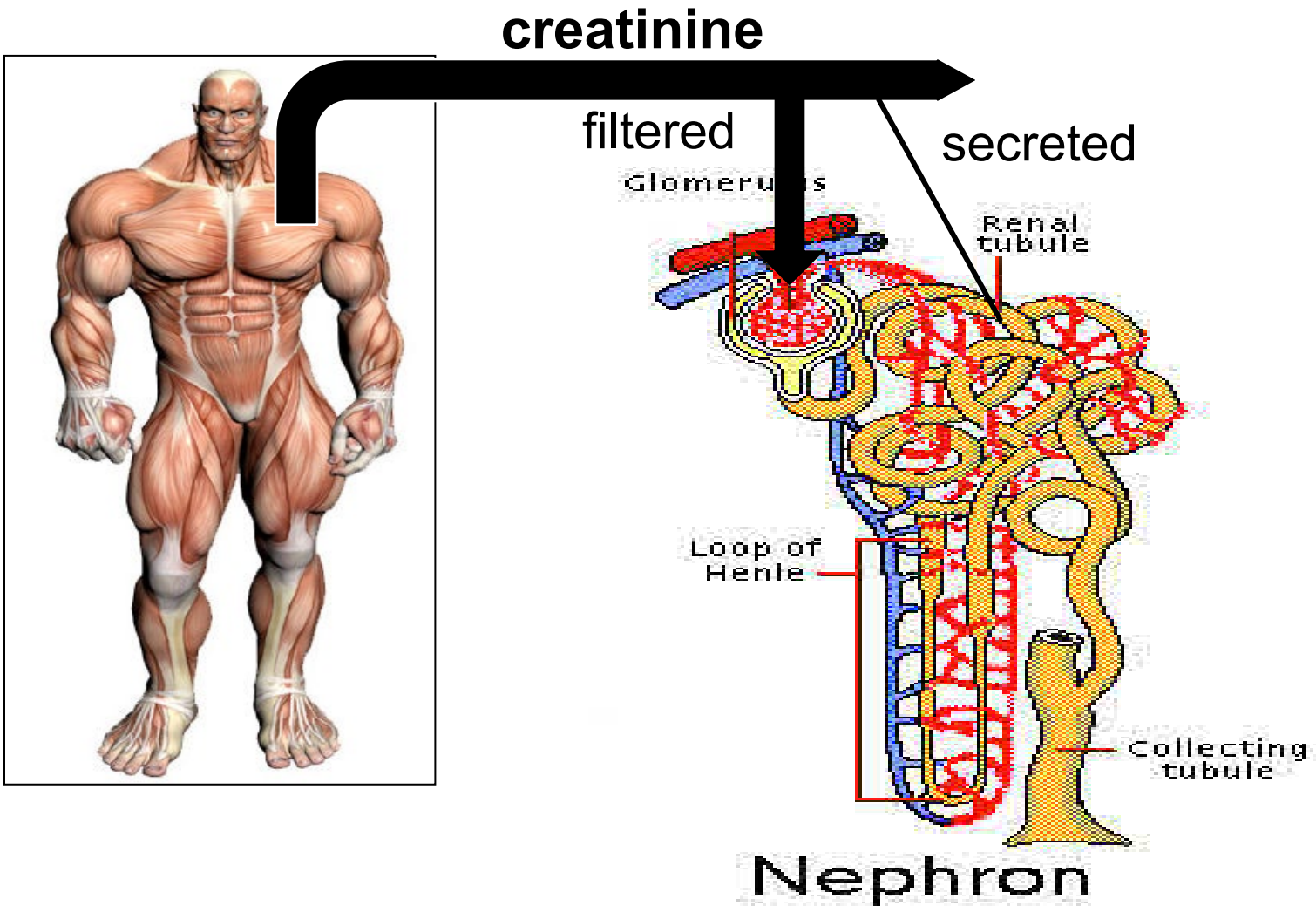
How Kidney Function is Measured

KSOSN KIDNEY SPECIALISTS OF SOUTHERN NEVADA

Step 1 - Creatinine

- Not harmful – Creatinine is a marker of kidney function
- Comes from your muscles
    - Every day you break down and build new muscle



Step 2 – Creatinine Removal

- Creatinine is carried by the blood to the kidneys where it is removed from the body
- When the kidneys are working normally, the amount of creatinine made every day is balanced by the amount removed in the urine and the number measured on the lab test remains stable
- When the kidneys are damaged for any reason, the amount of creatinine excreted in the urine goes down and you continue to make it; thus, the amount of creatinine in your blood increases

Glucose, Serum/Plasma	65 - 99 mg/dL	85
Comment: Fasting reference interval		
Urea nitrogen, Serum/Plasma (BUN)	7 - 25 mg/dL	37 ^
Creatinine, Serum/Plasma	0.60 - 0.95 mg/dL	1.59 ^
Estimated Glomerular Filtration Rate (eGFR)	> OR = 60 mL/min/1.73m2	31 v
Comment: The eGFR is based on the CKD-EPI 2021 equation. To calculate the new eGFR from a previous Creatinine or Cystatin C result, go to https://www.kidney.org/professionals/kdoqi/gfr%5Fcalculator		
Urea nitrogen/Creatinine, Serum/Plasma	6 - 22 (calc)	23 ^
Sodium, Serum/Plasma	135 - 146 mmol/L	138
Potassium, Serum/Plasma	3.5 - 5.3 mmol/L	4.8
Chloride, Serum/Plasma	98 - 110 mmol/L	106
Carbon dioxide CO2), total, Serum/Plasma	20 - 32 mmol/L	26
Calcium, Serum/Plasma	8.6 - 10.4 mg/dL	10.2
Phosphate, Serum/Plasma	2.1 - 4.3 mg/dL	3.9
Albumin, Serum/Plasma	3.6 - 5.1 g/dL	4.4

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Step 3 – Creatinine Varies by:

- Age
- Gender
- Two people can have the same creatinine and widely different kidney function
- We need to know your kidney function – estimated glomerular filtration rate (eGFR)

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eGFR 31

Step 4 – Creatinine and eGFR

- Creatinine and eGFR are inverse of each other.
- You want a low creatinine which will calculate to a high eGFR.
- As your creatinine increases, your eGFR will decrease.

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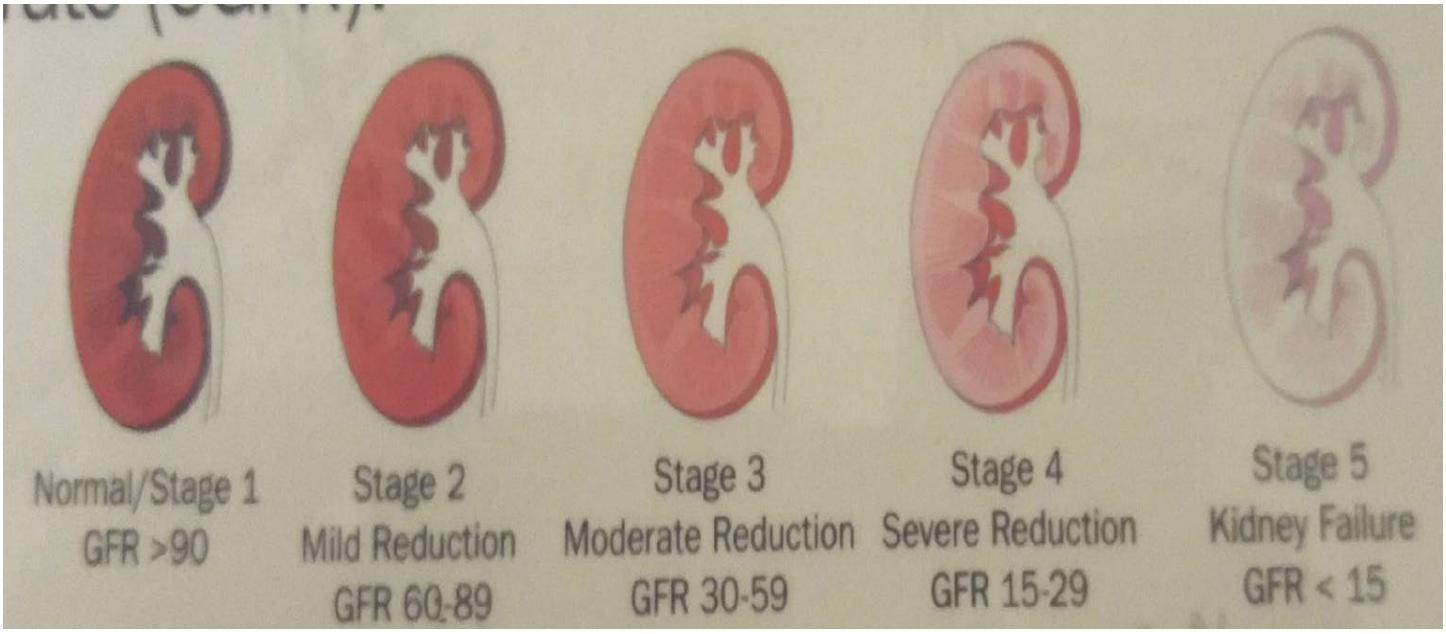
5 Stages of Chronic Kidney Disease

- About 15% of Americans have CKD.



Step 5 – Most Causes of CKD

- Diabetes
- Hypertension