

# IS THERE ROOM FOR HERBS


and

Functional Nutrition in Renal Therapy

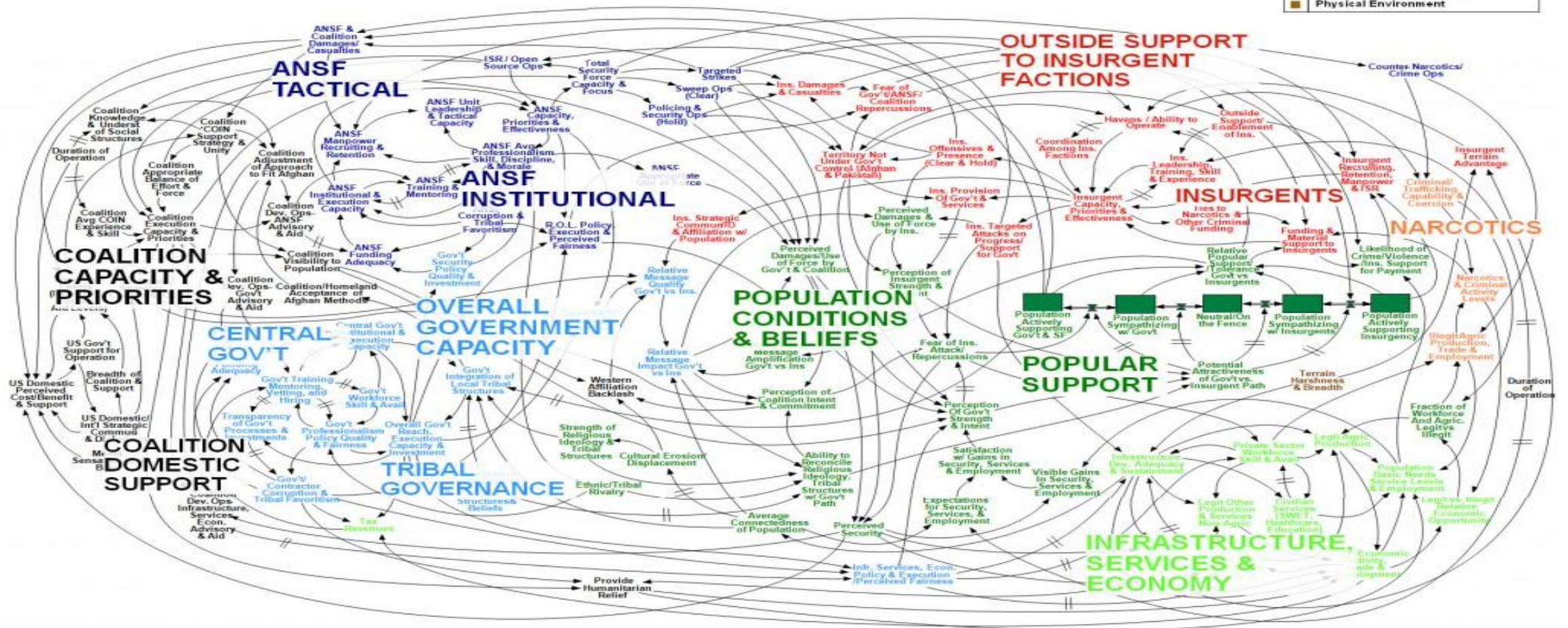
Njeri Kai Jarvis MS / RD / LDN



# Afghanistan Stability / COIN Dynamics

 = Significant Delay

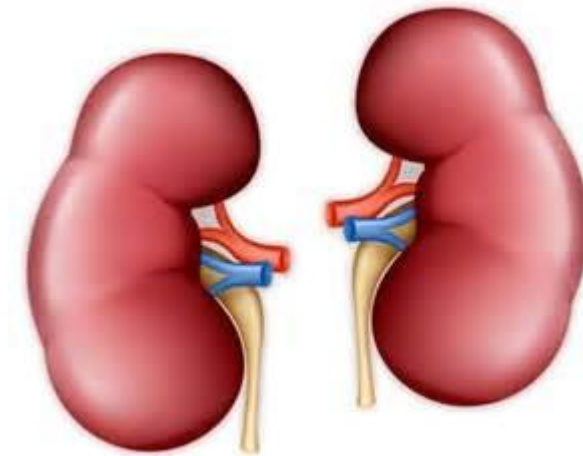
- Population/Popular Support
- Infrastructure, Economy, & Services
- Government
- Afghanistan Security Forces
- Insurgents
- Crime and Narcotics
- Coalition Forces & Actions
- Physical Environment



**WORKING DRAFT - V3**

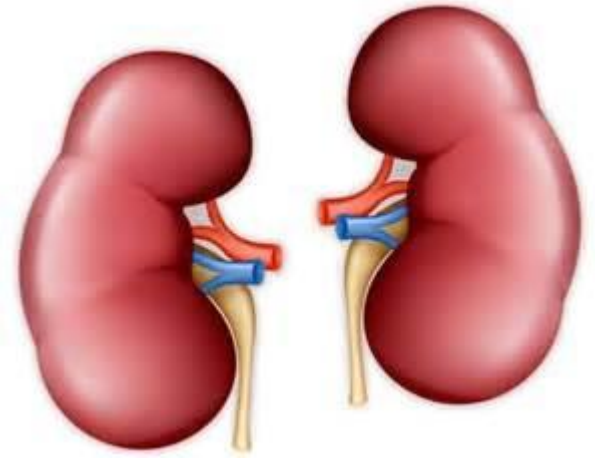
# Kidneys Main Functions

- To keep the make up of the extracellular fluid constant with regards to its salts, acid, nutrient content
- Produce Hormones
  - Angiotensin
  - Erythropoietin
  - prostaglandins



# What is Kidney Disease?

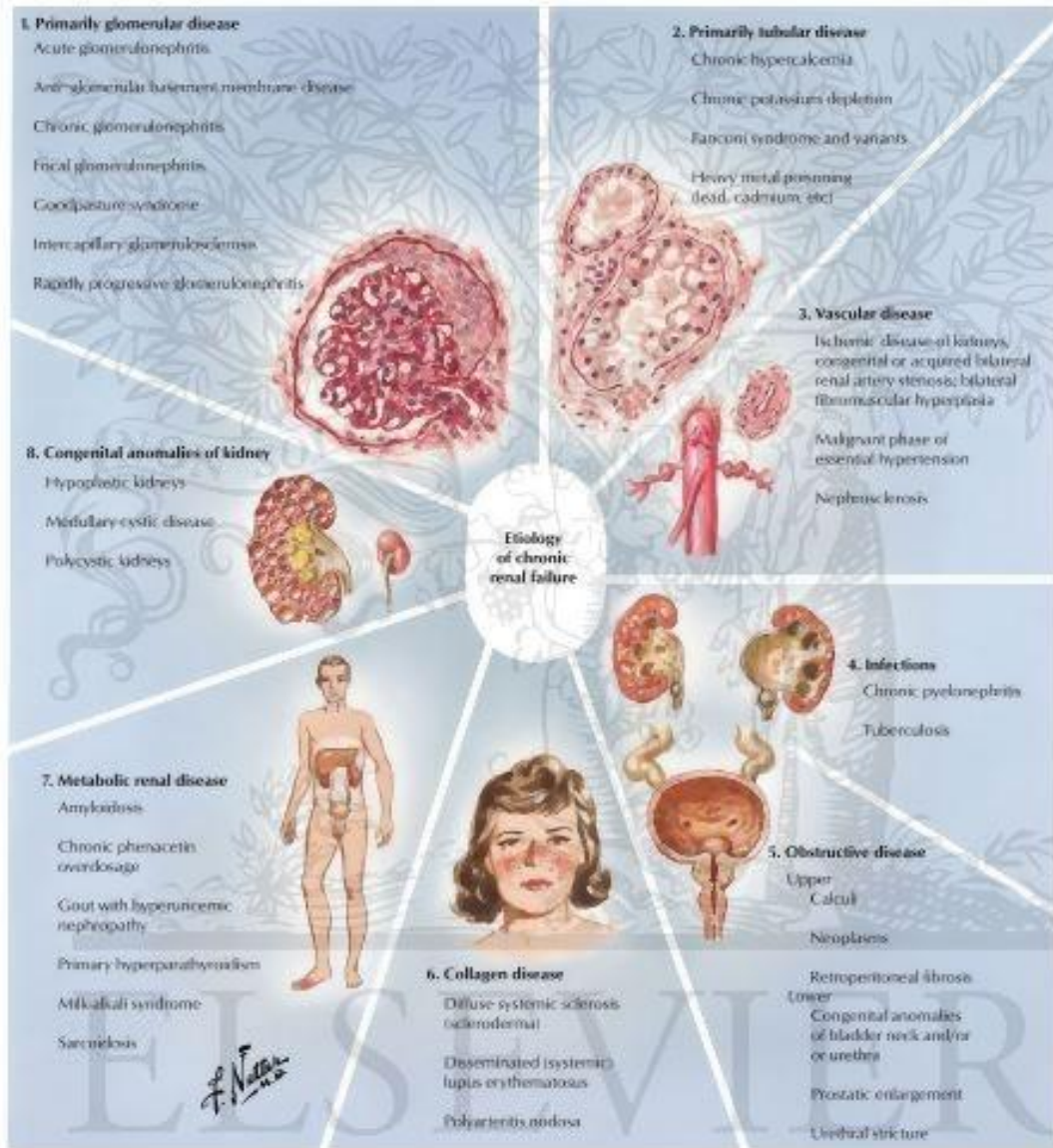
- Kidney failure is the loss of some but not all of the filtration capacity of the kidneys
- There are many different types of kidney diseases all of which cause a loss of filtration capacity



# BIG PICTURE

## Causes of Chronic Renal Failure

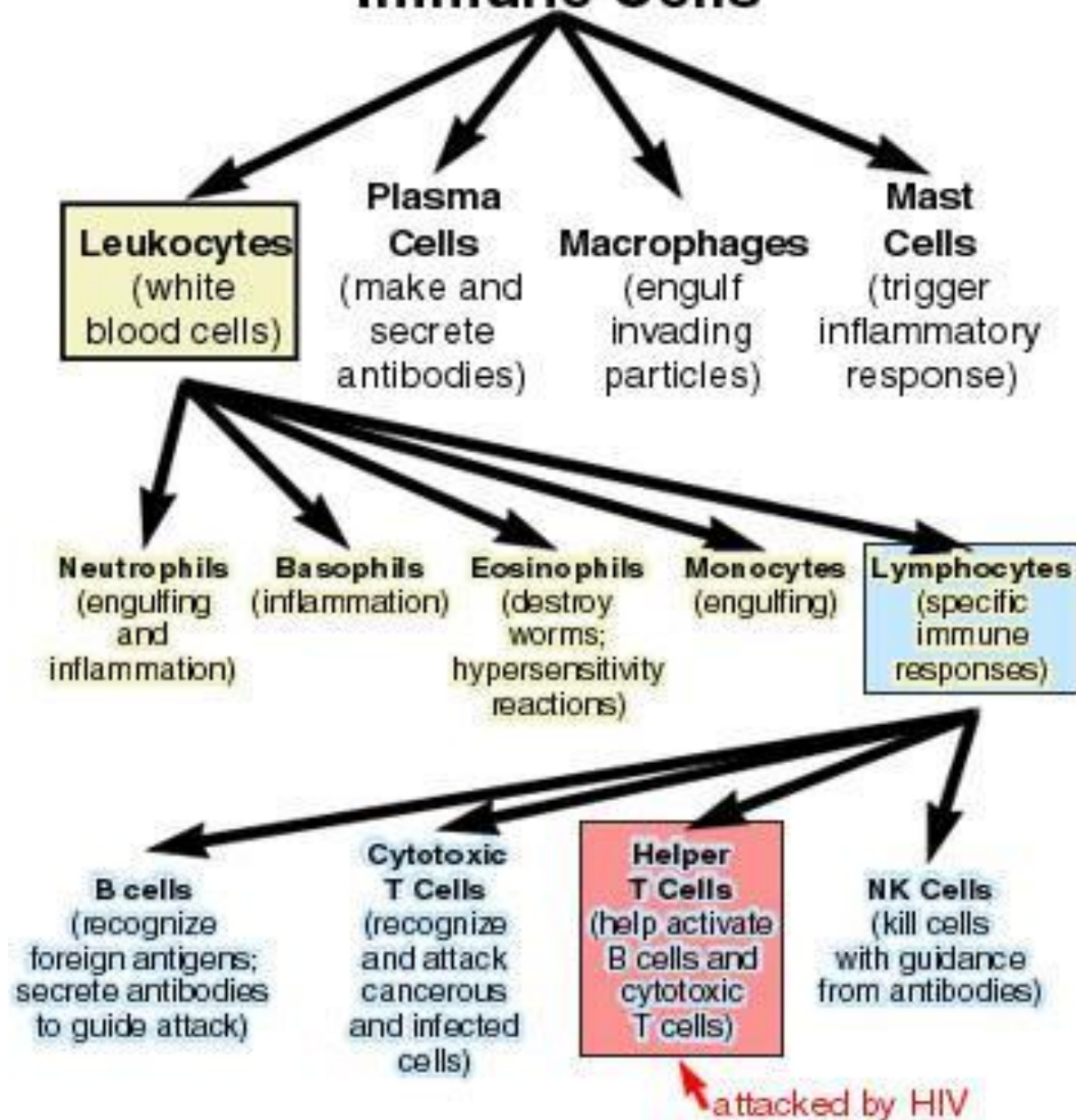
1. Primary glomerular disease
2. Primary tubular disease
3. Vascular disease
4. Infections
5. Obstructive Disease
6. Collagen disease
7. Metabolic Renal disease
8. Congenital anomalies of kidney



# Hypoxia – Common Path to Renal Failure

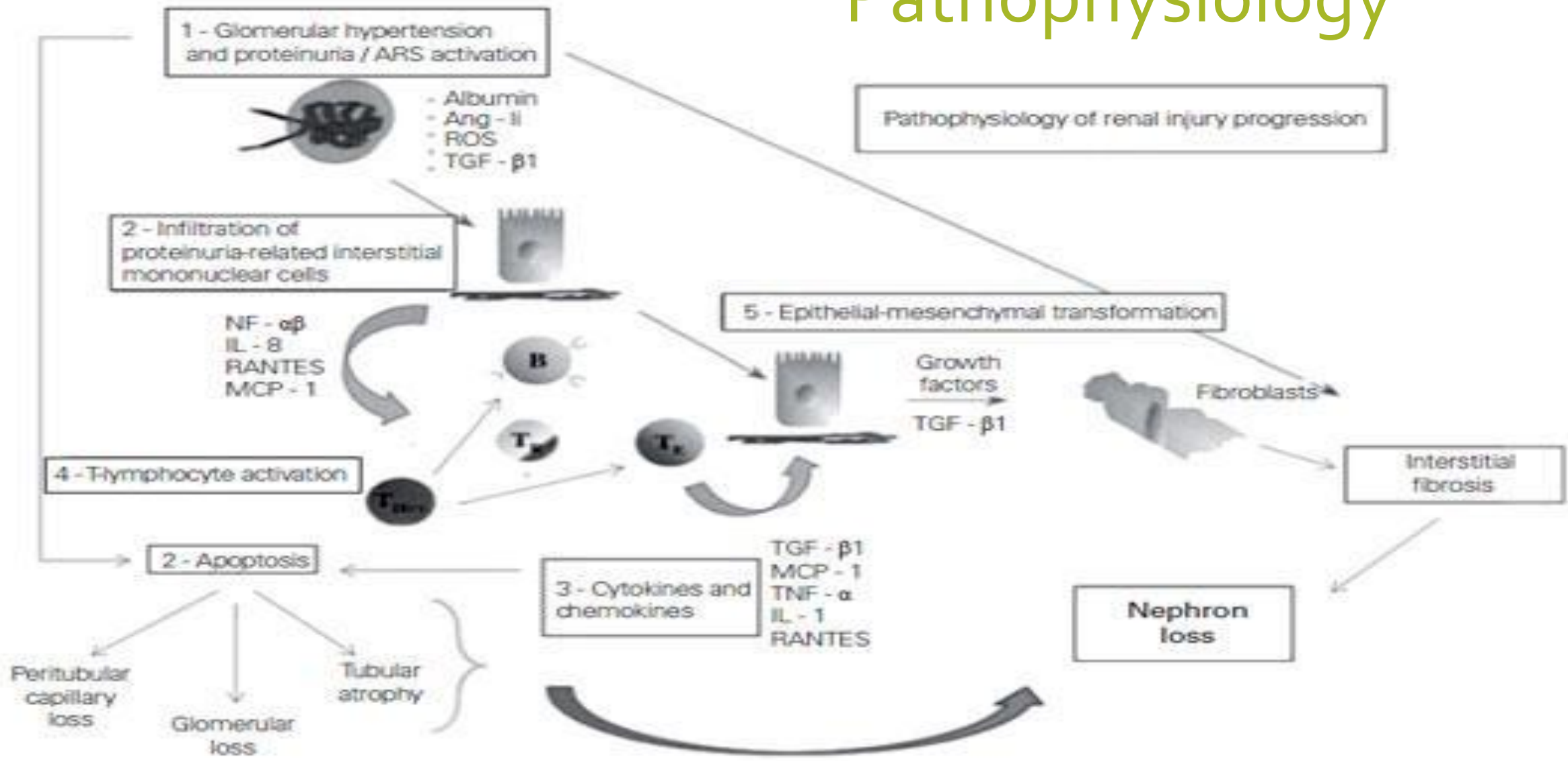
- A large body of evidence indicates that CKD is driven by **renal tissue hypoxia** and that **chronic hypoxia** is the final common pathway to end-stage renal failure.
- Numerous studies have demonstrated that one of the most potent means by which hypoxic conditions within the kidney produce CKD is by inducing a **sustained inflammatory attack by infiltrating leukocytes**.
- Consequently, targeting these transcriptional mechanisms would appear to represent a promising new therapeutic strategy. (Qiangwei, et al, 2016)
- [Clin Med Res](#). 2016 Mar; 14(1): 15–39.
- doi: [10.3121/cm.2015.1282](#)
- PMID: PMC4851450
- **Hypoxia: The Force that Drives Chronic Kidney Disease**
- [Qiangwei Fu](#), MD,<sup>\*</sup> [Sean P Colgan](#), PhD,<sup>†</sup> and [Carl Simon Shelley](#), D.Phil<sup>‡,1</sup>

# Immune Cells



# Pathophysiology

Pathophysiology of renal injury progression



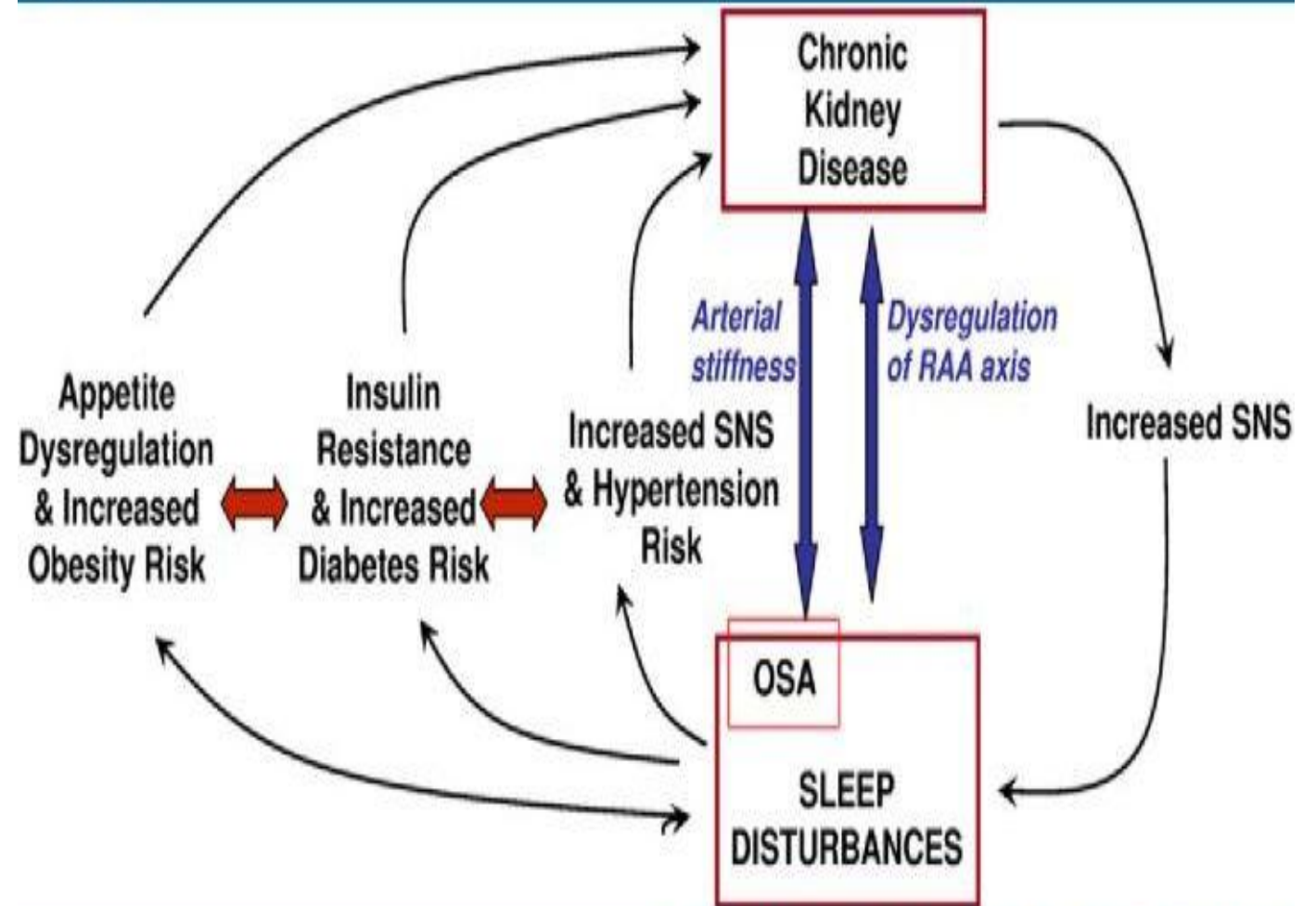


# Consider This

## Hypoxia and Inflammation from Sleep Apnea



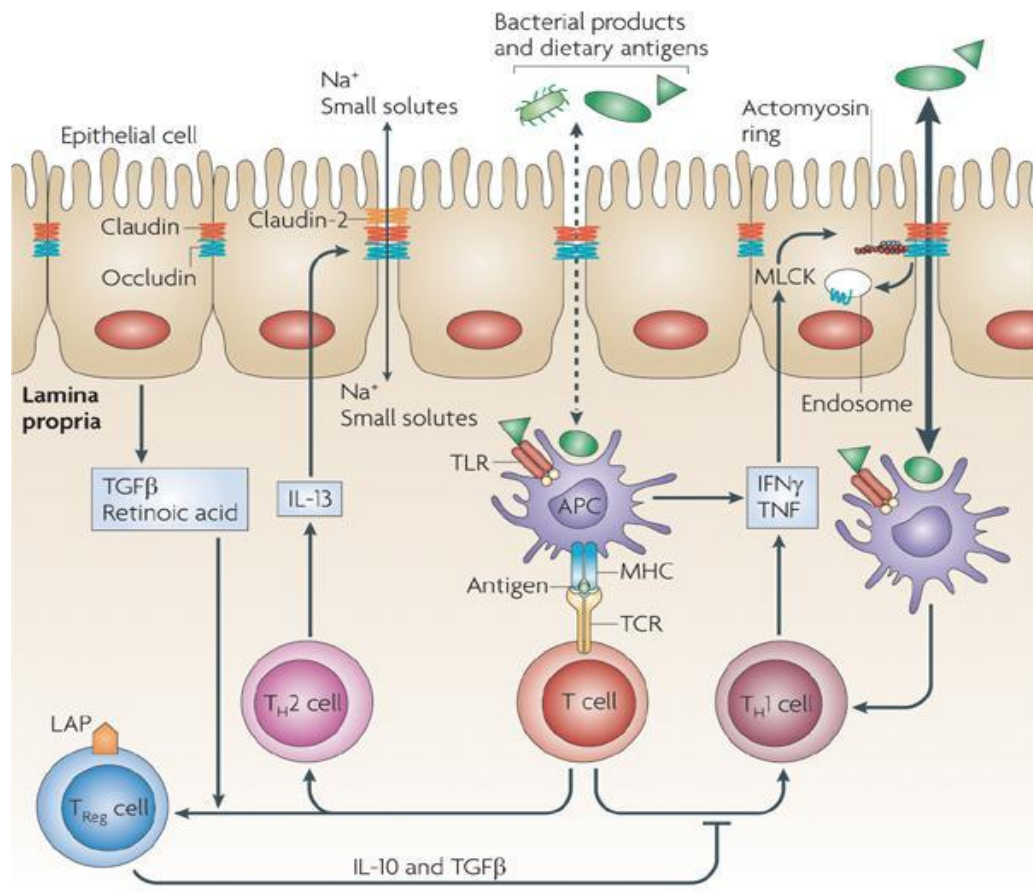
Medscape



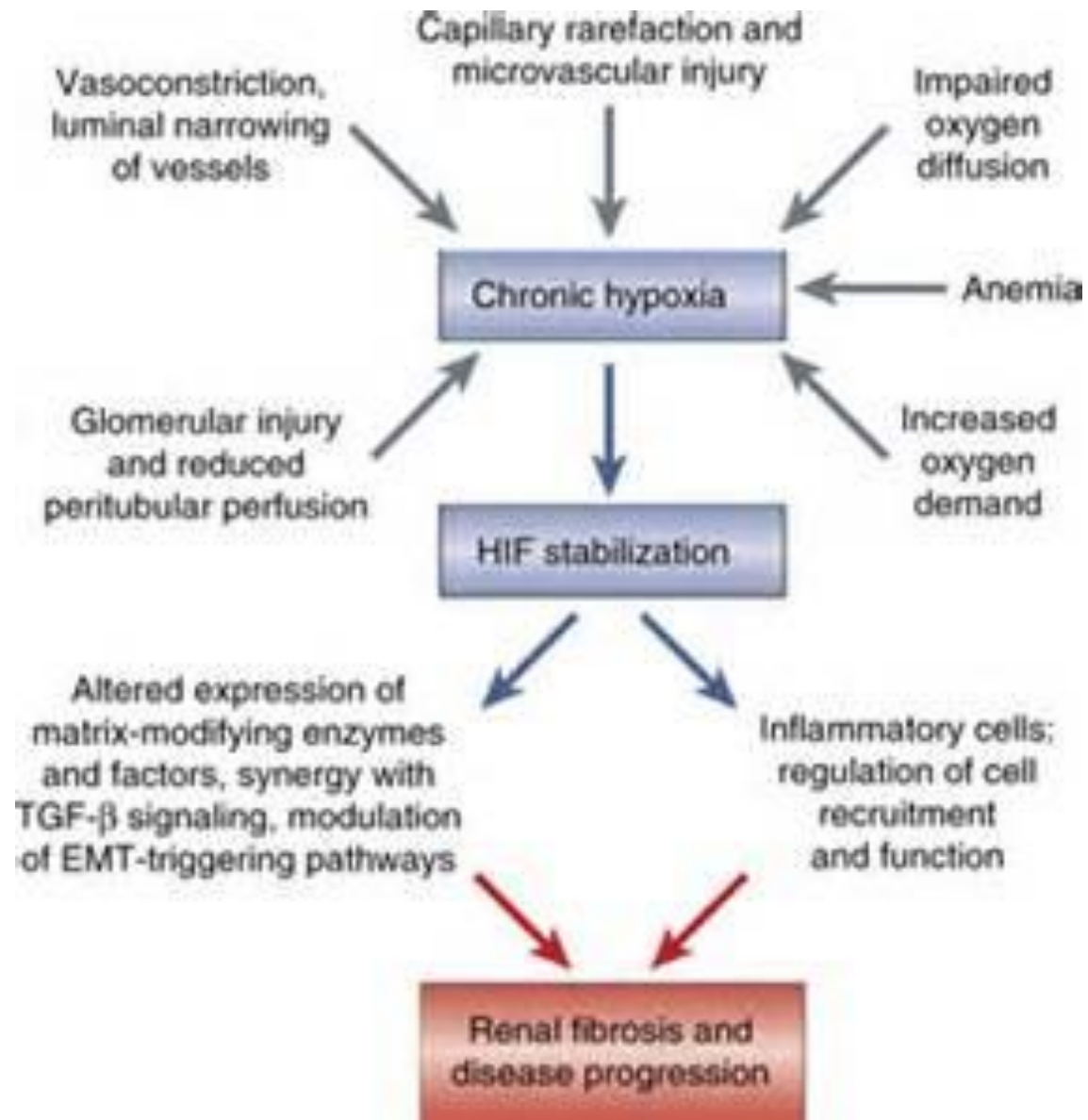
Source: Am J Kidney Dis © 2012 The National Kidney Foundation

# Consider This

## chronic inflammation from Failure of Tight Junctions



Nature Reviews | Immunology

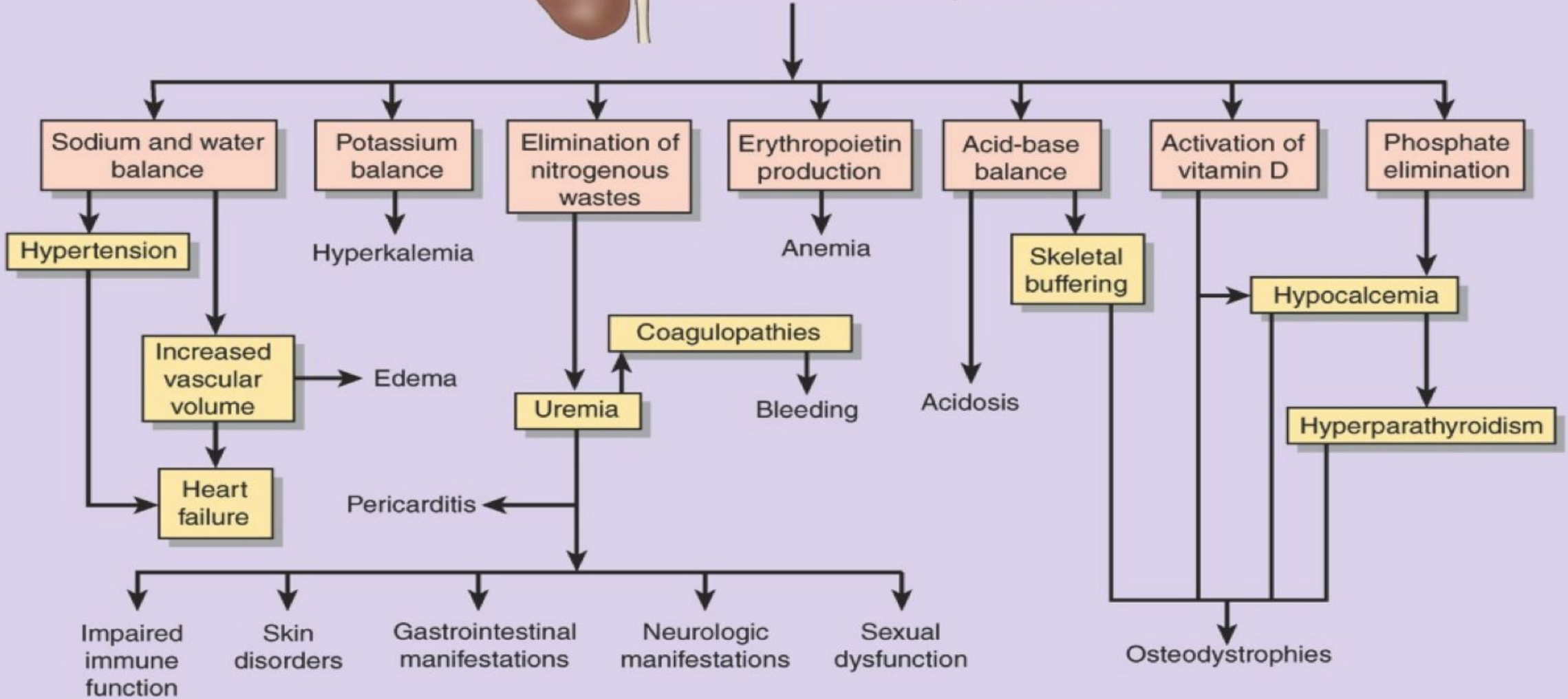


## FIVE STAGES OF KIDNEY DISEASE





## Chronic kidney disease



# Consider the Research

- Many people start maintenance dialysis as a means of relieving symptoms rather than as a result of biochemical markers warranting it
- Controlling symptoms can delay the need for maintenance dialysis and can prevent further kidney damage
- The disconnect between biochemical markers and symptoms and symptoms and quality of life for patients
- ADD RESEARCH STUDIES

## CHRONIC RENAL FAILURE (CRF)

- RENAL INSUFFICIENCY -



## Chronic kidney disease symptoms

Lloyd Healthcare Pvt. Ltd.  
[f](#) [t](#) [v](#) [/lloydhealthcare](#)



Vomiting



Not feeling hungry



Weakness



Sleep problems



Changes in urine



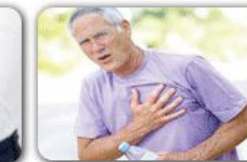
Hiccups



Swelling of feet



Itching



Chest pain



Shortness of breath



Why haven't we focused  
more on Prevention in the  
early stages of CKD

The Gap

# Causes for the Gap

- Study 20 years ago that is still being used
- Compensation comes at stage 5 and not much before
- Poorly allocated resources
  - Dietitians used at the end mainly

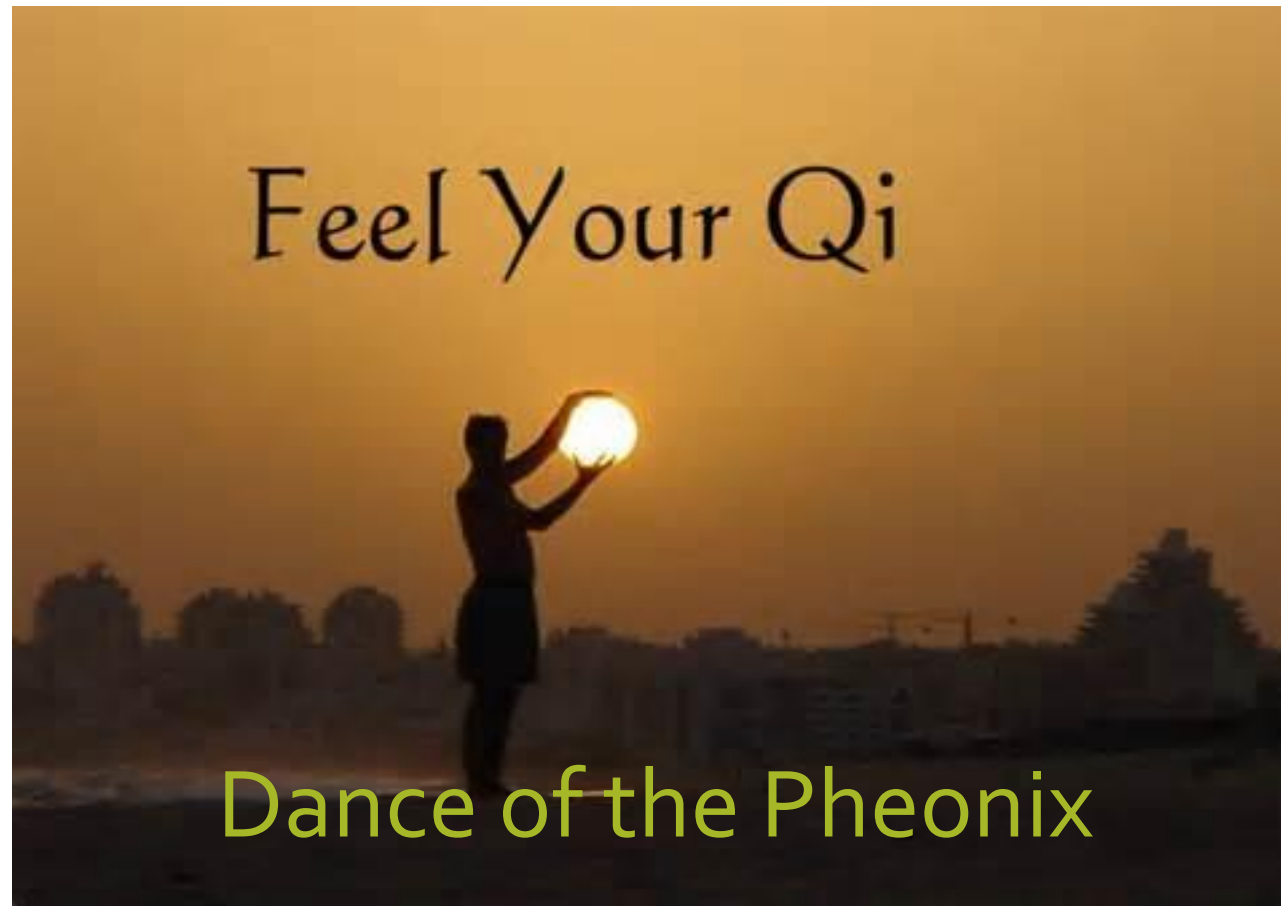


# Current Paradigm: Methods Currently Used to Prevent Kidney Damage and Symptoms

- Angiotensin blocking medications
- Fish oil
- Low protein diet for a short period



# Qi Gong Break !



# Is it time to consider New Paradigms?

- Preventing hypoxia
  - ✓ Supporting tight junctions and inflammatory response issues
  - ✓ Traditional herbs
- Greater use of Very Low Protein Diets to decrease uremia and limit symptoms that may increase the need for maintenance dialysis.
- Greater use of Nutrition Professionals to support stages 1-4 CKD



What's on the Horizon?

# Herbs in Use Traditionally for CKD

# Supporting Research

# Astragalus – *Astragalus Membranceus*



# Sage Root – *Salvia Militorrhiza*



# Cordyceps – *Cordyceps Sinensis*





# Tumeric - Curcumin



# Rhubarb – *Rheum officinalis*



# Additional Herbs with supporting research evidence.

- Bupleurum falcatum
  - saikosaponin
- Rehmannia
- TWHF (Tripterygium wilfordii Hook F)
  - Triptolide
- radix puerariae (kudzu root)
  - Puerarin

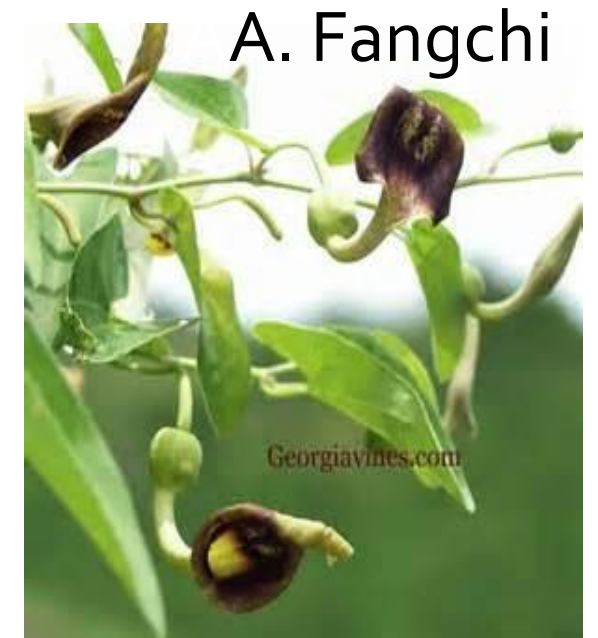
# Herbs to AVOID in CKD

**Aristolochia species** refers to several members of the genus family Aristolochiaceae

- Aristolochia debilis
- Aristolochia contorta
- Aristalochia manshuriensis
- Aristalochia fangchi

All caused kidney damage,  
leading to-

- rapidly progressive fibrosing interstitial nephritis.
- In animals, high doses administered orally or intravenously cause
  - severe necrosis of the renal tubules
  - atrophy of the spleen and thymus
  - ulceration of the forestomach,
  - hyperplasia and hyperkeratosis of the squamous epithelium



# Why haven't we used Herbal therapies more in the conventional healthcare community?



# Why Haven't We Had More Research on Herbs and Chronic Kidney Disease?



# What about Functional Nutrition?



Stop chasing symptoms and get to the root cause.



# Putting it Altogether...with what we know now

- ❑ The Very low Protein Diet
  - 0.6 – 0.8 grams of protein / kg body weight – 50% as High Biological value protein
  - Using supplemental amino acids
- ❑ Supporting a healthier microbiome
  - Increasing resistance starch intake
  - Consuming glutamine and glutamine rich foods and supplements
  - Consider use of fermented foods, pre and probiotics
- ❑ Supporting improved digestion or inflammatory reduction
  - Considering use of Bromelain and Enzymes
  - Use of glutamine
- ❑ Should we be using the specific carbohydrate diet more?
  - To limit inflammatory response by those sensitive to gluten, caseine and certain sugars
- ❑ Use of Promising Herbs
  - Consult an herbalist, acupuncturist, naturopathic doctor for recommendations and consistent monitoring.
  - Aged garlic for lowering blood pressure and cholesterol – as adjunct therapies





# What does 0.6 – 0.8 grams of protein/kg look like?

- For the average 70 kg or lb person



# Low Protein Resources



## Low Protein Web Sites

- [Cambrookefoods.com](http://Cambrookefoods.com)
- [Dietspec.com](http://Dietspec.com)
- [Ener-g.com](http://Ener-g.com)
- [Lowprotein.com](http://Lowprotein.com)
- [Med-diet.com](http://Med-diet.com)
- [Medicalfood.com](http://Medicalfood.com)
- [Shsna.com](http://Shsna.com)

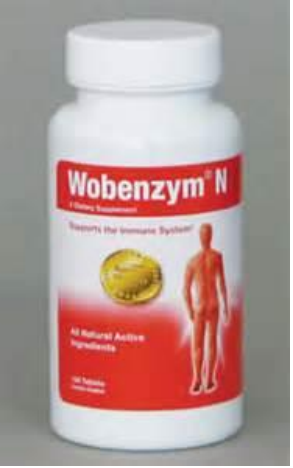


## Amino Acid Supplements



**CALWOOD  
NUTRITIONALS**  
Nutramine

# Consider these Supplements Enzyme with Bromelain



# Fermented foods

- The extent to which traditional dietary items may mitigate inflammation and oxidative stress may be controlled, at least to some degree, by microbiota. It is our contention that properly controlled fermentation may often amplify the specific nutrient and phytochemical content of foods, the ultimate value of which may associated with mental health; furthermore, we also argue that the microbes (for example, *Lactobacillus* and *Bifidobacteria* species) associated with fermented foods may also influence brain health via direct and indirect pathways
- [J Physiol Anthropol.](#) 2014 Jan 15;33:2. doi: 10.1186/1880-6805-33-2.
- Fermented foods, microbiota, and mental health: ancient practice meets nutritional psychiatry.
- [Selhub EM<sup>1</sup>](#), [Logan AC](#), [Bested AC](#).
- Also lactobacillus and bifido – help maintain tight junctions



# Sample Diet

# Questions