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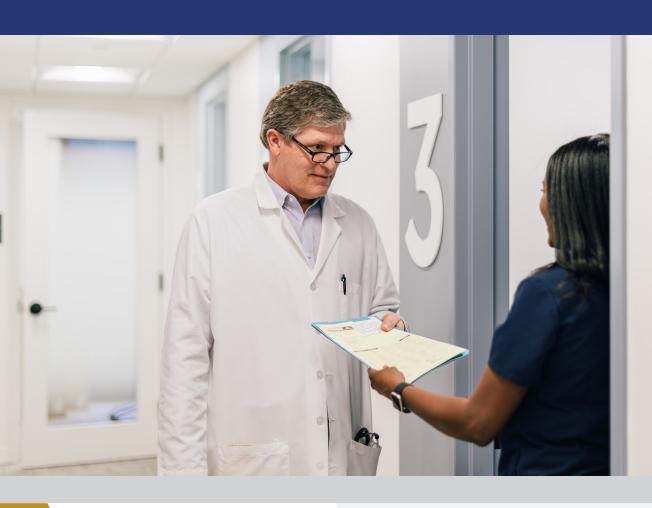
ADDRESS: 6600 France Ave South,

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# **CKD Education**

#### INTRODUCTION

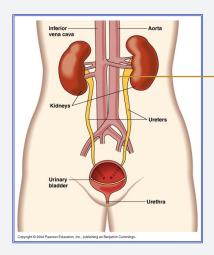


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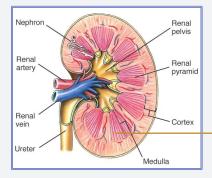
WHY LEARN ABOUT CHRONIC KIDNEY DISEASE (CKD)

- 1. Understand your labs and treatment plan as they change.
- 2. Try to slow the progression of kidney disease.
- 3. Handle the physical, emotional, and financial changes.
- 4. Prepare for the future.

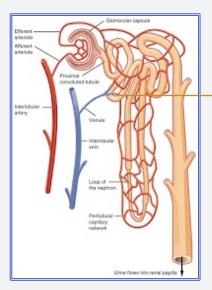
#### **ANATOMY**



Most people have two kidneys.



Unfiltered blood enters via the renal artery. Filtered blood exits via the renal vein.



Greater than 1.3 million nephrons in each kidney.

## KIDNEY FUNCTIONS

- Remove waste products from blood
- Balance the body fluids
- Regulate blood chemistry (i.e. acid-base, sodium, phosphorus, potassium)
- Regulate blood pressure
- Ensure bone health
- Signal red blood cell production
- Support heart and blood vessel function



# CAUSES OF CHRONIC KIDNEY DISEASE

#### **CAUSES**

- Diabetes (most common cause)
- High blood pressure
- Medications (NSAIDS, chemotherapy, contrast dyes)
- Infections
- Poor heart function
- Recurrent acute kidney injuries
- Autoimmune conditions

# CHRONIC VS. ACUTE KIDNEY DISEASE

#### CHRONIC KIDNEY DISEASE

- Non-reversible
- Progressive decline
- Variable progression rates

#### **ACUTE KIDNEY DISEASE**

- Sometimes reversible after acute insult
- Can become chronic

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#### **CKD LABS**

#### Creatinine

- Normal ~0.6 1.2
- Increases with progression of kidney disease

#### GFR (glomerular filtration rate)

- Normal > 90
- Lower with age
- Decreases with progression of kidney disease
- Is used to stage kidney disease

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### **STAGES OF CKD**

1	Normal	> 90
2	Mild Disease	60 - 89
3a	Mild to Moderate Disease	45 - 59
3b	Moderate to Severe Disease	30 - 44
4	Severe Disease	15 - 29
5	Kidney Failure	< 15

# SYMPTOMS OF ADVANCED CKD

**Fatigue** 

**Mood changes** 

Change in taste or metallic taste

Shortness of breath

**Decrease in appetite** 

**Swelling** 

Nausea and/or vomiting

**Itching** 

STAGE 5 CKD OR KIDNEY FAILURE

Despite treatment and effort, kidneys can still fail.

 CKD tends to be progressive, with kidney function declining over time.

Kidney functions falls below 10-15%.

Symptom burden increases

# With treatment, it is possible to live long and live well.

#### TREATMENT CHOICES:

- Kidney transplant
- Peritoneal dialysis
- Hemodialysis
- Conservative kidney management
  - Medical management
  - Palliative care
  - Hospice referral when appropriate



# GOAL OF FOLLOW-UP APPOINTMENTS

- ✓ Help to slow progression of CKD.
- ✓ Address the problems that come along with CKD.
- ✓ Education and preparation for renal replacement therapy (if warranted).
- ✓ Frequency of follow-up appointments depends on stage of CKD

## **QUESTIONS?**

InterMed Consultants has been providing renowned kidney care in the Minneapolis area, as well as greater Minnesota, since 1979.

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