



Acute Kidney Injury Versus Chronic Kidney Disease

Acute kidney injury (AKI) Also known as acute renal failure (ARF)	Chronic kidney disease (CKD) Also known as chronic renal failure (CRF)
<ul style="list-style-type: none"> • Sudden, rapid decrease of kidney function, over hours to days 	<ul style="list-style-type: none"> • Gradual or progressive decrease of kidney function, over months to years
<ul style="list-style-type: none"> • Sudden increase in blood urea nitrogen (BUN) or serum creatinine 	<ul style="list-style-type: none"> • Consistent but abnormal serum creatinine on consecutive days
<ul style="list-style-type: none"> • Decreased production of urine is common presenting symptom 	<ul style="list-style-type: none"> • Few obvious symptoms on initial onset • Hypertension is common presenting symptom
<ul style="list-style-type: none"> • Reversible; progression can be arrested by treating underlying condition 	<ul style="list-style-type: none"> • Irreversible
<ul style="list-style-type: none"> • Common causes include <ul style="list-style-type: none"> – Sudden interruption of blood supply to kidneys; – Acute disease (e.g., infection) of kidneys; and – Build-up of toxins in kidneys 	<ul style="list-style-type: none"> • Common causes include <ul style="list-style-type: none"> – Interruption of blood supply to kidneys over a prolonged period; – Primary disease of kidneys; and – Prolonged obstruction of flow of urine
<ul style="list-style-type: none"> • Commonly a result of <ul style="list-style-type: none"> – Trauma; or – Surgery; or – Chemical intake (e.g., drug overdose; toxicity from drugs taken in therapeutic use, such as antineoplastic chemotherapy or antibiotics) 	<ul style="list-style-type: none"> • Commonly a result of <ul style="list-style-type: none"> – Diabetes mellitus (most common); or – Chronic hypertension; or – Long-term chemical intake (e.g., acetylsalicylic acid, ibuprofen, acetaminophen)
<ul style="list-style-type: none"> • Dialysis may be required until underlying condition is treated/resolved 	<ul style="list-style-type: none"> • Dialysis or transplantation is eventually necessary to sustain life
<ul style="list-style-type: none"> • Anemia (due to low production of the hormone erythropoietin) is rare during initial onset 	<ul style="list-style-type: none"> • Anemia of chronic disease (due to low production of the hormone erythropoietin) is common
<ul style="list-style-type: none"> • Normal to large-size kidneys on ultrasound examination 	<ul style="list-style-type: none"> • Typically small kidneys on ultrasound examination

Acute on chronic kidney disease (AoCKD)

Also known as acute on chronic renal failure (AoCRF)

- When a patient with known CKD experiences a sudden spike in serum creatinine above the established baseline
- Measures must be taken to bring the serum creatinine back down to baseline