

CLAIMS PROCEDURE

At Star Health Insurance, we always interact with customers with a humane and healing touch. We ensure it remains the same when customers need assistance by keeping the claim process simple and easy. We have a 24x7 medical assistance for consultation and facilitation with regard to hospitalization needs. Our aim is to provide cashless hospitalization in a hassle-free and time-bound manner.

We have entered into arrangements with network hospitals to provide cashless hospitalization, so you don't have to worry about any advance payments. The steps to avail this benefits are as follows:

Inform the Star Health Call Centre by quoting the Star Identity Card or Policy number within 2 hours of admission. This is mandatory.

Show the Star Identity Card / quote the Policy number at the hospital reception and request for cashless hospitalization.

Ensure that the completed Pre-authorization form and related medical reports are faxed to the Star Health Call Centre by the hospital. This is mandatory.

A copy of Pre-authorization form duly filled along with all relevant medical reports (that substantiates the need for hospitalization) should be provided by the hospital to the visiting Star Health doctor.

On receipt of duly filled Pre-authorization form and based on the feedback from Star Health's doctor, appropriate decision will be communicated to the hospital by us.

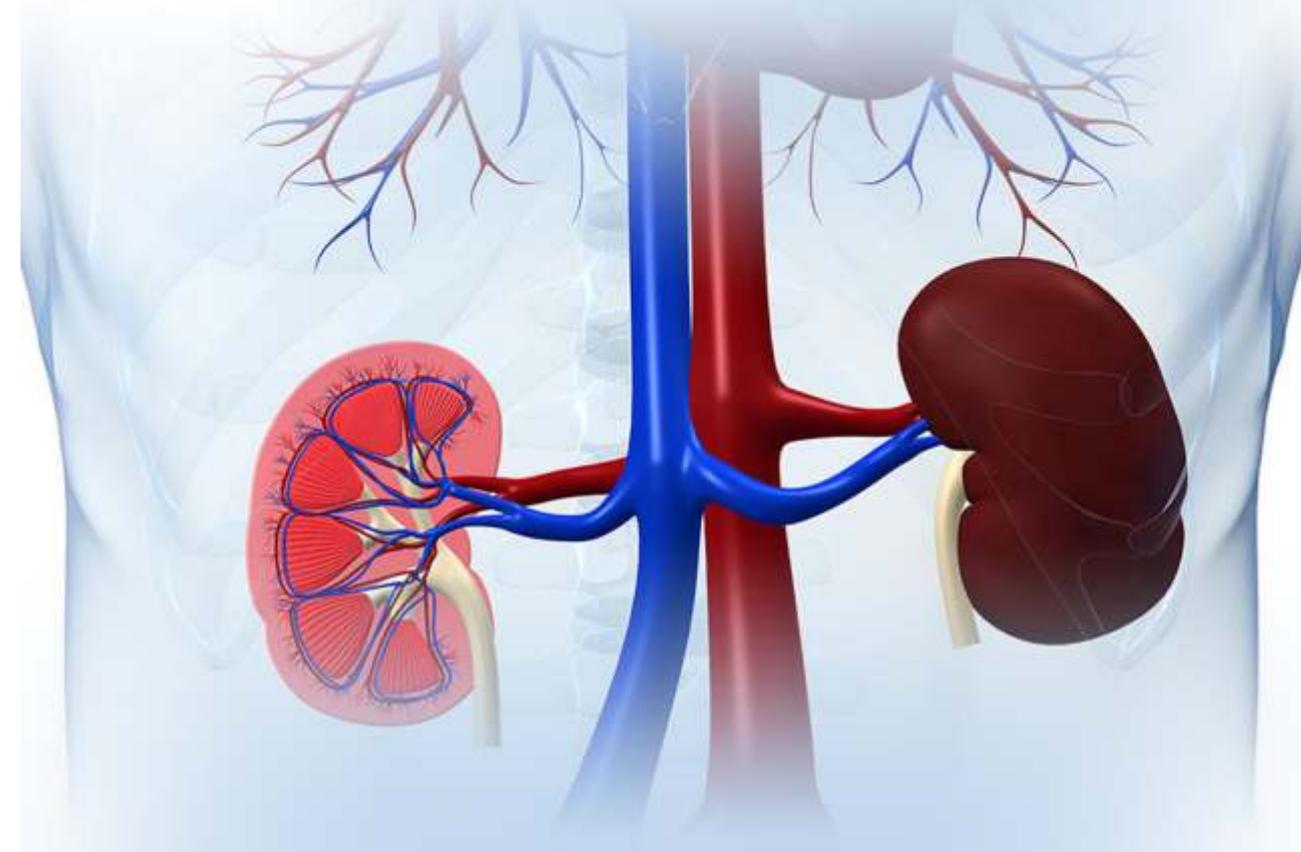
The authorization letter mentioning the amount sanctioned for the treatment will be faxed to the hospital. This helps the policy holder to get treatment without paying any money to the hospital.

SMS "STAR" to 56677 | www.starhealth.in

Toll Free: 1800 425 2255 | Fax Toll Free: 1800 425 5522

Disclaimer: No part of this publication may be produced without the prior permission of the publisher. All care has been taken about factual accuracy in compilation, updation and validation of information. However, the publisher accepts no responsibility for inadvertent errors, if any, and their consequences.

Insurance is the subject matter of solicitation.



Kidney

in functional focus

- 01 Message from CMD
- 02 Control Diabetes – Keep Your Kidneys Healthy
- 06 Hypertension: What is making your blood boil
- 10 Sticks and stones may break my bones.... Bone problem in chronic renal disease
- 14 TO CIRCUMCISE OR NOT TO CIRCUMCISE – Parental Dilemma
- 16 Kids and kidneys : Urological Problems in Children
- 22 Diabetes & Kidney
- 25 Fitness Section
- 29 Recipe Corner
- 30 IT Innovation Of The Month - Digitising Personal Health Records

Publisher:
Mr. V. Jayaprakash

Designed & Printed by:
Alaknanda Advertising Pvt Ltd
4/III Flr, City Centre Plaza
3, Mount Road, Chennai - 2.

Chief Editor:
Dr. Asiya Shahima Khan

Editorial Board Members:
Dr. S. PRAKASH
Dr. C.B. KRISHNA KUMAR
Dr. S. KRISHNA SHANKAR
Dr. JEBAVICTOR

Corporate Office
Star Health and Allied Insurance Company Ltd
#1, New Tank Street, Valluvar Kottam High Road
Nungambakkam, Chennai – 600034
Email: editor@starhealth.in

About Your Company

India's First Standalone Health Insurance Company has begun its operations in May 2006. Today the Company's capital base stands at Rs. 438 Crores.

STAR HEALTH INSURANCE PRODUCTS:

- FAMILY HEALTH OPTIMA
- ACCIDENT CARE
- MEDI CLASSIC INSURANCE
- STAR TRUE VALUE INSURANCE
- STAR SUPER SURPLUS INSURANCE
- STAR TRAVEL PROTECT
- STAR STUDENT CARE INSURANCE
- MICRO HEALTH INSURANCE
- STAR NET PLUS INSURANCE
- STAR SENIOR CITIZEN RED CARPET POLICY
- DIABETES SAFE INSURANCE
- STAR HEALTH GAIN
- STAR CRITICARE PLUS
- STAR SHRI INDIVIDUAL CARE
- STAR SHRI FAMILY CARE
- STAR UNIQUE HEALTH INSURANCE POLICY
- STAR WEDDING GIFT POLICY
- STAR COMPREHENSIVE INSURANCE
- STAR FAMILY DELITE INSURANCE

Many more to come....

Star Health Specialties

- A user friendly website with Health tips
- 235 offices across India with 5000 Employees
- Cashless treatment facility with more than 5000 Network Hospitals across India
- A full-fledged 24X7 call Centre with a Toll free facility (1800 425 2255) for effective claims handling
- Free General Physician Consultation over phone. Doctors on duty 24X7. By quoting the policy number, any person can contact our doctor for medical advices.

Message from CMD



My dear policyholder,

The current issue covers the topic on diseases related to Kidneys. As I always mentioned that you will kindly observe that the articles contributed by eminent Doctors will serve as a guide book for whomsoever when needed. As usual we function for your comfort and we are always open to receive your communication about any deficiency in our services.

With your kind support, the company is growing and it will always stand by your side to serve you.

V. Jagannathan
Chairman-cum-Managing Director

OUR NEXT ISSUE WILL FOCUS ON ONCOLOGY ...



Dr. Asiya, MBBS, M. Med. Sc.,
 General Manager-Medical
 Claims Department,
 Star Health and Allied Insurance Company Ltd., Chennai.



The question that always arises in everybody's mind is "How are Diabetes and Kidney diseases related?"

Well, the fact is- Diabetic patients are 17 times more prone to develop kidney disease.

Diabetic Nephropathy is the leading cause of **Chronic Renal Failure (CRF)** and **End Stage Renal Disease (ESRD)** in the world. This is due to the increasing prevalence of Type 2 Diabetes, which in turn increases the magnitude of the health problems in our society. About 25-50% of all cases of ESRD is due to Diabetes.

Most important cause of mortality and morbidity in Type 1 Diabetes- 50% of those with overt nephropathy reach ESRD within 10years and 75% by 20 years

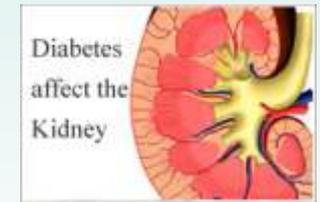
In Type 2 Diabetes there is slower progression- 20% of them reach ESRD

What is Diabetic Nephropathy?

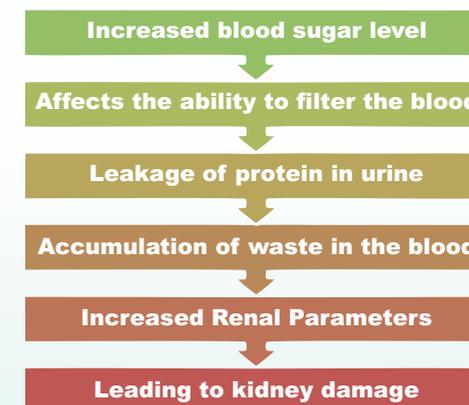
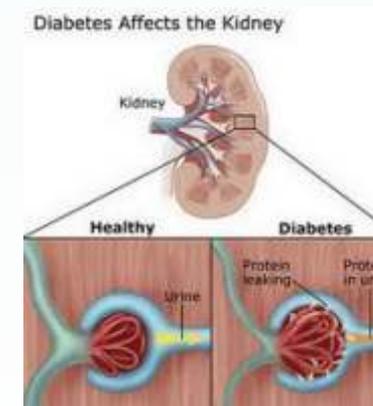
It is a clinical condition in which a diabetic person presents with persistent proteinuria >500mg/day, accompanied with evidence of Diabetic Retinopathy and Hypertension, in the absence of other kidney or renal tract disease.

RISK FACTORS FOR DIABETIC NEPHROPATHY:

- ▶ Hypertension(High and Uncontrolled Blood Pressure)
- ▶ Hyperglycemia(Uncontrolled Blood Sugars)
- ▶ Microalbuminuria
- ▶ Long duration of diabetes
- ▶ Strong family history
- ▶ Cigarette smoking
- ▶ Hyperlipedemia
- ▶ Ethnicity
- ▶ More common in males



HOW DIABETES CAN AFFECT YOUR KIDNEYS



STAGES OF NEPHROPATHY:

Stage1: Hyperfiltration or Glomerular Hypertrophy changes

Stage2: Normoalbuminuria with increase in Glomerular Basement Membrane Thickness

Stage 3: Microalbuminuria along with decreased GFR

Stage 4: Massive Proteinuria with Hypertension

Stage5: End Stage Renal Disease with Glomerular closure

What is **Microalbuminuria**? (Protein Leak in the Urine)

This refers to the level of protein excretion between 30-300mg/day. It is the earliest clinically detectable stage of Diabetic Kidney Disease. Microalbuminuria is also a marker of generalized endothelial dysfunction. In type 2 diabetes it may correlate with systemic hypertension, cardiovascular disease, peripheral vascular disease and premature atherosclerosis.

Screening for Microalbuminuria

Test for Microalbuminuria should be done annually in

- ▶ All Type 2 Diabetic patients starting at diagnosis
- ▶ Type 1 Diabetes with duration more than 5years or at puberty

The **methods** available for screening:

- ▶ Measurement of Albumin to Creatinine Ratio in a random spot sample(do not do immediately in post exercise period)
- ▶ 24 hour collection along with simultaneous measurement of creatinine clearance(mg/24hrs)
- ▶ Timed collection(ug/min)
- ▶ Measure serum creatinine and calculate estimated Glomerular Filtration Rate(eGFR) atleast annually to stage the level of kidney disease.

Treatment of Diabetic Nephropathy

- ▶ **Strict Glycemic control:** In case of heavy proteinuria>1000mg/day or renal insufficiency 'INSULIN' is the drug of choice

- ▶ **Blood Pressure Control:** In proteinuric diabetic patients<125/75mmHg(JNC VII). The drug of choice is ACE/ARB'S

- ▶ **Dietary Modification:** Protein restriction of 0.6 -0.8gm/kg/day is recommended by the ADA. Indian diet is low in protein and is more of plant origin, hence protein restriction to this level is not needed.

- ▶ **Other Aspects of Management -**

Avoid Nephrotoxic drugs and radio contrast media

Avoid dehydration

Avoid Smoking

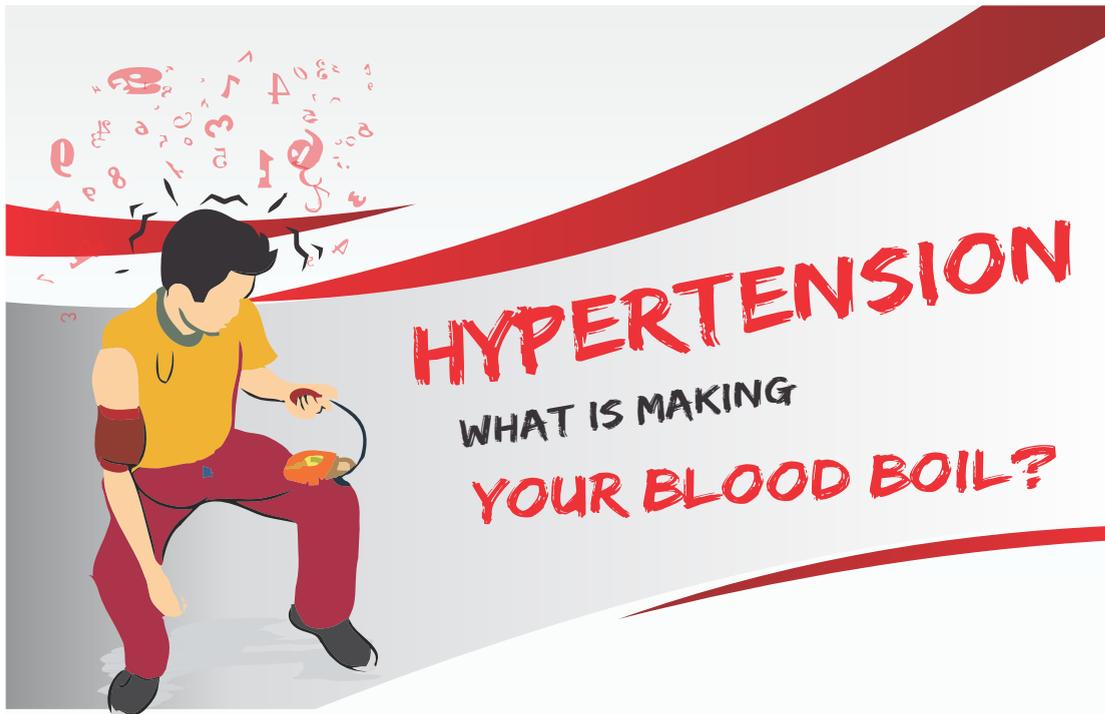
Treat Urinary Tract Infection aggressively

Statin therapy for Lipid control

Ultimate **Treatment Goal:** "To prevent or retard progression of Diabetic Nephropathy leading to ESRD"

Diabetic Nephropathy and Pregnancy

The presence of Microalbuminuria and proteinuria indicates poor prognosis for both mother and fetus during pregnancy as they are strong predictors of pre-eclampsia. Treatment with ACE's and tight glycemic control for at least 3 months prior to pregnancy reduces the risk. During pregnancy Methyldopa or Calcium channel blockers can be given for control of blood pressure as ACE's are contraindicated.



Dr. M. Ravikiran M.D, D.M (Endo)
 Consultant Endocrinologist
 Agada Diabetes Care



Hypertension is a very common disorder affecting approximately 10% of the population. There are 2 different categories of hypertension – primary (essential) or secondary.

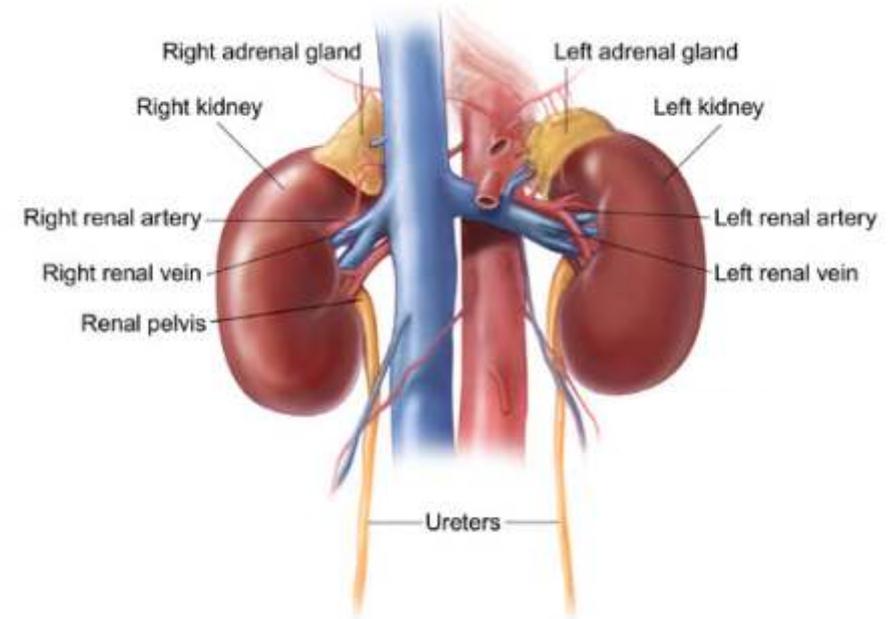
Essential hypertension is the type we encounter commonly and is unrelated to any specific underlying disorder. Genetic predisposition and many lifestyle factors including stress, excess salt intake, lack of physical activity and cigarette smoking contribute to Essential Hypertension.

Secondary Hypertension refers to high Blood pressure caused by (i.e. secondary to) a specific underlying disorder. Secondary Hypertension could be due to

longstanding kidney problem, or decrease in blood flow to kidney (renal artery stenosis) or to excess hormone secretion by adrenal glands or thyroid. When you go to a physician for high blood pressure, he or she usually checks for features that may give a clue to any underlying disorder. If there are no clinical clues for these 'secondary' causes, your high blood pressure is considered as simple or 'Essential' Hypertension. The rest of this article will provide a brief overview of adrenal disorders causing high blood pressure.

What are adrenals?

Adrenals are a pair of hormone secreting glands, located one on top of each kidney (ad-near, renal – kidney). Adrenals have an inner portion called medulla and an outer portion called cortex. Medulla releases hormones called adrenaline and noradrenaline. Adrenal Cortex produces three main hormones – cortisol, aldosterone and sex steroids.



What do adrenal hormones do in my body?

Adrenaline and Noradrenaline are concerned with maintaining heart rate, blood pressure, sweating and quick response to stressful situations.

Cortisol is concerned with utilizing glucose, protein and fats inside your body, regulating inflammation and also with stabilizing your blood pressure. Aldosterone is concerned with maintaining the sodium and water balance in your body, which influences the blood pressure.

As mentioned above, most of these adrenal hormones (cortisol, aldosterone, adrenaline and noradrenaline) are concerned with blood pressure regulation inside our body. However when these hormones are secreted in excess from tumors in the outer or inner parts of adrenal, it results in high blood pressure. The disorders which cause high blood pressure include Primary Aldosteronism, Pheochromocytoma and Cushing's syndrome.

Primary Aldosteronism

Secretion of too much aldosterone, called Primary Aldosteronism (PA), causes the kidneys to retain sodium and water inside the body and lose potassium, resulting in water build-up and a rise in blood pressure. If you develop this condition, sometimes you may experience leg cramps and weakness due to low potassium level. This situation could be due to a small discrete tumor in an adrenal gland or a general overactivity of both adrenal glands. Current reports suggest that as many as one in ten persons with high blood pressure may have PA. Also if you have PA, you may have a greater risk of developing heart disease and stroke as compared to other people with high blood pressure.

You may be at risk for primary aldosteronism if you have:

- High blood pressure that requires more than three medications to manage
- High blood pressure that started at a young age (less than 30 years of age)
- Family members who had stroke at a young age
- A low potassium level (called hypokalemia)

If you have high blood pressure and also have any risk factor as listed above, you should get tested for this condition.

Pheochromocytoma

Pheochromocytoma is a rare adrenal gland tumor that secretes excess adrenaline and noradrenaline. Since these hormones are concerned with metabolism, heart rate, sweating and bowel movements, you may have attacks of palpitations, excess sweating and headache. You may experience weight loss or constipation and may feel nervous or anxious out of proportion to the situation you encounter.

Your doctor may suspect and suggest tests for Pheochromocytoma if you have:

- high blood pressure that requires more than three medications to manage
- high blood pressure that started at a young age (less than 35 years of age)
- blood pressure that keeps fluctuating between high and normal or even low of its own
- headache, nervousness, palpitations or hand tremor along with high blood pressure.

This condition can be diagnosed by certain blood and urine tests and location of tumor can be known through CT or MRI scan. While the high blood pressure can be controlled through certain medications called alpha- and beta-blockers, the tumor itself requires

surgical removal.

Cushing's syndrome

This was named so after Dr. Harvey Cushing, a neuro surgeon, who discovered it.

Excess cortisol secretion underlies this condition. Persons may start putting on weight and develop rounding of facies (moon face) despite reasonable attempts at increasing physical activity and dietary restriction. Skin may get thinned out and even purple stretch marks may form. Sugar levels may become high.



Your doctor may evaluate you for this condition, if you have

- Continued weight gain and rounding of face
- New purple coloured stretch marks especially over the flanks and thigh
- Diabetes in addition to weight gain

This condition can be diagnosed by a few blood tests and tumor can be located by MRI or CT scan. Surgery provides final cure.

Conclusion

For a long time, it was thought that the other forms of high blood pressure as described above were rare. However, with the current reports we know that as many as one in ten persons with high blood pressure may be having one of these conditions. If you have any of the symptoms mentioned earlier, you can discuss with your doctor about testing for these disorders. If we pick up any underlying condition early enough, we can cure the disorder by medications and surgery.

STICKS AND STONES MAY BREAK MY BONES

Bone problem in chronic renal disease



Dr. G. Shanmugasundar MD,
DM (PGIMER, Chandigarh)
Consultant Endocrinologist
AGADA DIABETES CARE



It is well recognized now that chronic kidney disease (CKD) involves different organ complications, including heart disease, anemia and bone disease. As early as CKD Stage 3 (which means that patients have a kidney function that approximates half of normal) patients are at a greater risk of going on to get more severe kidney disease. Patients are also at an increased risk of getting bone disease or other illnesses affecting the entire body. Bone is affected in many ways due to kidney problem and it is one of the areas which is mostly under-evaluated and under-treated.



What is chronic kidney disease-mineral and bone disorder (CKD-MBD)?

CKD-MBD occurs when the kidneys fail to maintain the proper levels of calcium and phosphorus in the blood, leading to abnormal bone hormone levels. CKD-MBD is a common problem in people with kidney disease and affects almost all patients receiving dialysis.

CKD-MBD is most serious in children because their bones are still growing. The condition slows bone growth and causes deformities. One such deformity occurs when the legs bend inward toward each other or outward away from each other; this deformity is referred to as “renal rickets.” Another serious complication is short stature. Symptoms can be seen in growing children with renal disease even before they start dialysis.

The bone changes from CKD-MBD can begin many years before symptoms appear in adults with kidney disease. For this reason, the disease is known as a “silent crippler.” If CKD-MBD in adults is left untreated, the bones gradually become thin and weak, and a person with CKD-MBD may begin to feel bone and joint pain. CKD-MBD also increases the risk of bone fractures.

Doctors used to use the term renal osteodystrophy to describe the mineral and hormone disturbances caused by kidney disease. Now renal osteodystrophy is used only to describe the bone problems that result from CKD-MBD.

Why are hormones and minerals important?

In healthy adults, bone tissue is continually being remodeled and rebuilt. The kidneys play an important role in maintaining healthy bone mass and structure because one of their jobs is to balance calcium and phosphorus levels in the blood and ensure the vitamin D a person receives from sunlight and food becomes activated.

Calcium is a mineral that builds and strengthens bones. Calcium is found in many foods, particularly milk and other dairy products. If calcium levels in the blood become too low, four small glands in the neck called the parathyroid glands release a hormone called parathyroid hormone (PTH). This hormone draws calcium from the bones to raise blood calcium levels. Too much PTH in the blood will remove too much calcium from the bones;

over time, the constant removal of calcium weakens the bones.

Phosphorus, an element found in most foods, also helps regulate calcium levels in the bones. Healthy kidneys remove excess phosphorus from the blood. When the kidneys stop working normally, phosphorus levels in the blood can become too high, leading to lower levels of calcium in the blood and resulting in higher PTH levels and the loss of calcium from the bones. Even before blood levels of phosphorus become elevated, the kidneys are forced to work harder to clear phosphorus from the body.

Healthy kidneys produce Calcitriol from vitamin D that is received from sunlight and food. Calcitriol helps the body absorb dietary calcium and phosphorus into the blood and bones. Calcitriol and PTH work together to keep calcium balance normal and bones healthy. If Calcitriol levels drop too low, PTH levels increase and calcium is removed from the bones. In a person with kidney failure, the kidneys stop making Calcitriol. The body then cannot absorb calcium from food, leading to increased PTH levels. The combination of decreased calcium absorption from food and PTH drawing calcium from bones makes the bones weak and brittle.

How is CKD-MBD diagnosed?

Bone disease can start long before you show any signs. Because of this, it is often called the “silent crippler.” The only way to know how healthy your bones are is to be tested.

- Blood test to check for:
 - Calcium, Phosphorus, Albumin and Alkaline Phosphates
 - Parathyroid hormone (also called PTH)
 - Vitamin D
 - X-ray
- Bone density scan
- Bone biopsy (rare)

How is CKD-MBD treated?

Controlling PTH levels prevents damage to bones. Usually, overactive parathyroid glands are controllable with a change in diet, dialysis treatment, or medication.

CKD-MBD can be treated with changes in diet. Reducing dietary intake of phosphorus is one of the most important steps in preventing bone disease. Almost all foods contain phosphorus, but it is especially high in milk, cheese, dried beans, peas, nuts, and peanut butter. Drinks such as cocoa, dark sodas, and beer are also high in phosphorus. Often, medications called phosphate binders—such as calcium carbonate, calcium acetate, sevelamer hydrochloride, or lanthanum carbonate are prescribed with meals and snacks to bind phosphorus in the bowel. These medications decrease the absorption of phosphorus into the blood. A renal dietitian can help develop a dietary plan to control phosphorus levels in the blood.

Increasing dialysis dose by increasing a patient's flow rate or time in treatment can also help control phosphorus.

If the kidneys are not making adequate amounts of Calcitriol, a person can take synthetic Calcitriol as a pill calcium supplement may be required in addition to Calcitriol. The drug cinacalcet hydrochloride lowers PTH levels by imitating calcium's effects on the parathyroid gland. If PTH levels cannot be controlled, the parathyroid glands may need to be removed surgically.

A good treatment program, including proper attention to diet, dialysis, and medications, can improve the body's ability to repair bones damaged by CKD-MBD. Overall bone health can also be improved by exercising and not smoking. People on dialysis should consult a health care professional before beginning any exercise program.

Points to Remember

Chronic kidney disease-mineral and bone disorder (CKD-MBD) occurs when the kidneys fail to maintain the proper levels of calcium and phosphorus in the blood.

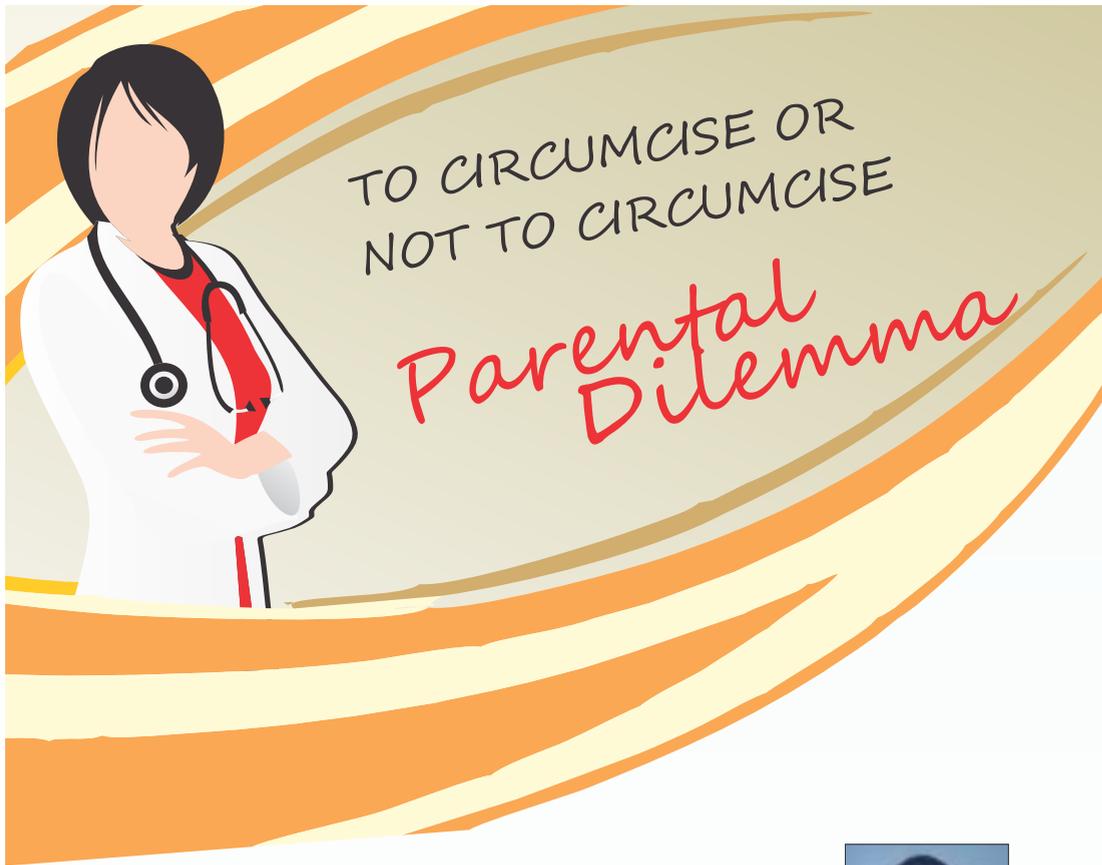
CKD-MBD is a common problem in people with kidney disease and affects almost all patients receiving dialysis.

If calcium levels in the blood become too low, or phosphorus levels too high, four small glands in the neck called the parathyroid glands release a hormone called parathyroid hormone (PTH). This hormone draws calcium and phosphorus from the bones to raise blood calcium levels.

High-Phosphorus Foods

Talk to your dietitian about how much of these high-phosphorus foods you should have:

- Milk
- Cheese
- Fish
- Red meat
- Dried beans and peas
- Nuts and peanut butter
- Whole grain bread
- Bran
- Cocoa
- Dark sodas
- Beer



Dr. S. PHILIP CHANDRAN M.B.B.S. M.S.
 GENERAL SURGERY, M.Ch. PAEDIATRIC SURGERY
 PAEDIATRIC SURGEON
 RETIRED PROFESSOR AND HOD OF PAEDIATRIC SURGERY
 MADRAS MEDICAL COLLEGE



Phimosis or tight foreskin of penis is a common complaint for which parents seek medical attention for their sons. Phimosis in infancy is physiological (change that occurs during normal phase of development) as the prepuce skin protects the external meatus (external urinary opening) from the irritant effects of urine. In newborn boys the inner layer of foreskin is fused to the glans penis. Gradually the layers separate and the skin cells are shed off which may be seen as whitish material under the foreskin called 'Smegma'. Sometimes smegma deposits may be fairly large and seen or felt as a plaque across the skin.

Phimosis

Phimosis is physiological in young babies especially till 3-4 years of age. By that age the layers should separate and foreskin should become retractable to allow for daily cleaning. Pathological (abnormal) phimosis is seen when it causes problems or persists beyond 5 years of age. Unnatural pulling back of the skin in a small child may lead to paraphimosis and also psychological trauma.

Paraphimosis

What is circumcision?

Circumcision is the removal of the foreskin, the skin that covers the tip of the penis. Circumcision has been known to mankind since the times of Abraham in the Middle East. Female circumcision that has been practiced in certain parts of Africa is to be condemned.

Is circumcision for everyone?

There are certain cases where circumcision is not done as the prepuce skin is used for repair and reconstruction in certain disorders.

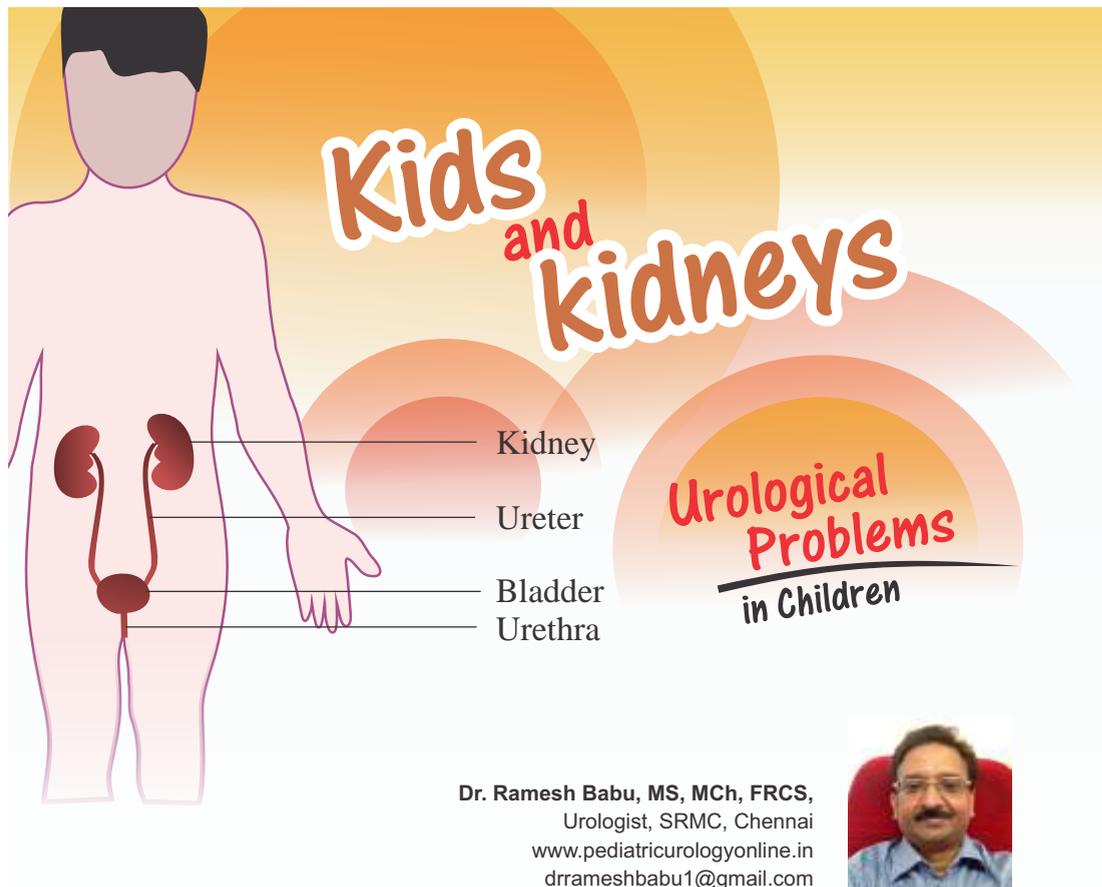
It is to be noted there is no decrease in the sexual or tactile sensation after circumcision. Rarely meatal stenosis occurs following circumcision.

Advantages:

1. Reduced incidence of urinary infection
2. Reduced incidence of sexually transmitted disease
3. Reduced incidence of HIV infection
4. Reduced incidence of Papiloma virus warts
5. Reduced incidence of cancer Penis

Conclusion:

Phimosis in children is a common problem faced by many parents. Early detection and appropriate intervention will ensure that the child has the optimal quality of life.



Hydronephrosis (Kidney Stretching)

H ydronephrosis means water logging in kidney. There are multiple causes to hydronephrosis. It is often because of a partial or complete block in the drainage of urine.

When kidneys only stretch, the blockage is suspected at a higher location (PUJ obstruction). When the pipe draining the kidney also stretches, blockage is suspected at a lower location (VUJ obstruction).

Newborns with this problem need to be scanned on the third day after birth. In general very mild stretching is likely to settle spontaneously. Huge stretching requires surgery urgently to prevent loss of kidney function (renal failure). Children with moderate stretching need close monitoring with repeat scans.

When both kidneys stretch, usually they are blocked as urine exits the bladder in the 'urethra'. In boys a valve like blockage can result in stretching of both kidneys

(posterior urethral valve – PUV). Immediate endoscopic intervention after birth is essential to prevent urine infection and kidney failure.

Antenatal Counseling (Consultation before birth)

When there is a fetal kidney problem, there could be a lot of anxiety among parents. Antenatal counselling can relieve the anxieties and also provide answer to many questions. It will help to plan the type of delivery, place of delivery (where the treatment is available to the baby after birth), the type of tests required after birth. Also it helps to find out more about what is expected in the long run (prognosis) and whether the problem can occur again in future children (familial incidence).

Hydronephrosis (PUJ)

In this condition there is a blockage of urine at the junction of kidney and the pipe draining (ureter) - pelvi ureteric junction (PUJ). Because of this the kidney stretches. Often it affects one side alone although it can involve both kidneys.

What are the symptoms of hydronephrosis?

Detected before birth (Antenatal Scans): The condition should not cause the mother to have any symptoms. Hydronephrosis should not cause the baby to have any problems before birth, but he or she needs close monitoring after birth to keep an eye on the condition.

Colic or Pain abdomen: This can be a feature in older children. This is because of the urine in the kidney trying to push and overcome the blockage.

Urinary Infection (UTI) Whenever there is any blockage to urine flow, the system can easily catch infection. These children may have fever, frequent painful urination etc.

How is hydronephrosis diagnosed?

Ultrasound Scan: Hydronephrosis is diagnosed using an ultrasound scan. It helps to determine the severity of blockage; reflected by the amount of dilatation.

Nuclear Scan (DTPA scan): For this test a small dose of medicine is injected in to the vein; pictures are taken with a gamma camera (like x-ray) every few minutes; this shows how fast the kidneys take up the medicine and how fast it leaves the kidney. When there is a blockage, the medicine stays in kidney for a long time. Also information on kidney function is obtained. If blockage is there for a long time, kidney function may reduce. Since nuclear scan involves only one tenth the radiation of X ray, conventional IVP is not done in children these days and DTPA scan is preferred over it.

MCU: This is mainly to exclude problems like reflux or a valve.

How can hydronephrosis be treated?

If the hydronephrosis is diagnosed during pregnancy, early treatment will consist of monitoring with ultrasound, to check that the baby is growing normally and the kidneys are not getting too large. The baby will usually be borne by a routine delivery.

After the baby is born, the hydronephrosis will be monitored using ultrasound scans and

Nuclear scans.

When the hydronephrosis is getting worse (increasing pelvis diameter on ultrasound) or the kidney function is reducing (on DTPA scan) surgery called pyeloplasty is recommended. Posterior Urethral Valves (PUV)

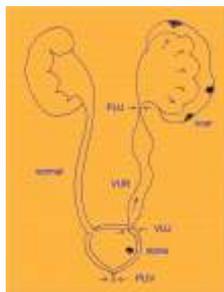
Posterior urethral valves (PUV):

It is a condition found only in boys. PUV occurs in one in every 8000 boys born. It affects the urethra (the tube which runs from the bladder to the outside). In boys with PUV, the urethra has a blockage in it near the bladder. This makes it difficult for them to pass urine. As the bladder pushes hard to get the urine out, it causes pressure which may result in urine being pushed back from the bladder into the ureters and kidneys (reflux). This causes the kidneys and bladder to swell. This also may lead to kidney damage.

What are the symptoms of PUV?

There are various symptoms associated with PUV, but they may not affect every child in the same way. The degree of blockage determines the severity of the symptoms. These boys can have

- urinary tract infections (UTIs)
- difficulty urinating
- a weak stream of urine
- unusually frequent urination
- bedwetting after toilet training has been successful
- poor weight gain
- an enlarged bladder, so that it can be felt through the abdomen as a lump



How is it diagnosed?

PUV can be diagnosed by a routine ultrasound scan during pregnancy if the bladder, ureters or kidneys are swollen. It can also be diagnosed in a newborn baby if the bladder is swollen and urine dribbles constantly. If the blockage is not severe the condition can remain undetected until the child has symptoms as above.

Ultrasound of abdomen – shows enlargement of kidneys and ureters on both sides. Bladder may be thickened

Micturating cystourethrogram (MCU) - this test shows urine passing from the bladder to the urethra and then to the outside. In children with PUV, the urine stream is thin and there is dilatation of urethra close to the bladder where the valve is blocking. It will also show if the urine is flowing backwards towards the ureters and kidneys (reflux).

Blood tests - these will show how well your child's kidneys are working and check that there is enough fluid inside the body.

How can PUV be treated?

There are several options for treatment, depending on how severely the symptoms are affecting your child:

The first course of action usually deals with the symptoms and includes putting a catheter (thin, plastic tube) into the bladder to drain away the urine. Any UTIs and fluid imbalance will also be treated with antibiotics and intravenous (IV) fluids.

Following this the valves are destroyed with the help of a cystoscope (a tube with a light on the end) – called Cystoscopic fulguration. This is a delicate procedure and needs to be done under general anaesthesia. Following this a catheter is left in for a few days. Some times a second sitting is required after a few months.

Urinary infection/Vesico Ureteric Reflux

A child is considered to have urinary tract infection (UTI) when the urine of the child grows bacteria during a microbiological test and the amount is significantly high (more than one lakh per ml). During childhood 5% of girls and 2% of boys get UTI. In the new-born period more boys get UTI than girls. Among the girls half can get a second UTI within a year.

Why is UTI important in children? How do we suspect urinary infection?

The incidence of underlying kidney problem is far higher in children compared to adults. 30-50% of children with UTI can have a kidney problem. If left untreated, it can lead to multiple infections, kidney scarring and in the long term hypertension and renal failure.

When the UTI involves bladder alone, one experiences frequency, pain and burning sensation while passing urine. When the kidneys are also affected, high fever, vomiting, tummy pain and feeling unwell, can be the features.

How is UTI diagnosed? How is UTI managed?

Initial urine tests with microscope can help to identify presence of UTI. However it is confirmed only after growing organisms in a large number when tested in micro lab. After confirming the diagnosis, it is usually treated with a course of oral antibiotics. If kidney infection is suspected, the child may require hospitalization for IV fluids and antibiotics via IV route. Once UTI is treated, an ultrasound scan is requested to look for any underlying abnormalities.

What is Vesico Ureteric Reflux (VUR)? How do we diagnose VUR?

In normal state, the urine travels in a one-way direction from kidneys to the bladder via the ureter. Once in bladder, the urine does not go back up either during storage or emptying. But in children with Vesico Ureteric Reflux (VUR), the urine goes upstream towards the kidneys. Because of this the kidneys are exposed to serious infection and scarring may result. This is picked up on a test called DMSA scan.

A test called MCU is done to diagnose VUR. In this a special radio opaque dye is injected via a catheter into the bladder. X-rays are taken while the child passes urine. Normally urine should not go up towards kidneys. But in children with VUR it goes up.

What is the treatment for VUR? When is operation required for VUR? What does it

involve?

When VUR is present the usual treatment is to put them on long term low dose antibiotics (sometimes up to 4-5 years). This prevents the kidney getting infected. Most of them do not require surgery.

When a child gets recurrent urine infections despite being on antibiotics, or when the reflux is very high grade with kidney scarring, then surgery is recommended. In this the length of ureter inside the bladder is increased, thereby creating a one-way valve. This prevents urine going back upstream. It is done under general anesthesia and involves 5-7 days hospital stay. The success rate is above 95%.

What are the general measures one should take to prevent urine infections?

Encourage the child to drink plenty of water

Ask them to go to toilet regularly

Prevent constipation by giving plenty of vegetables and fruits

Avoid bladder irritants like coffee, tea and coke.

Avoid exposing genitalia to soap, or shampoo, or bubble baths.

Bio-yoghurts, curd and cranberry juice have been shown to reduce UTI.



Hypospadias

Little baby boys pass urine like a fountain. Small lads can stand and pass urine straight with an ability to point the stream where they want, like a fire-man's hose. This is possible because the urine comes out of the opening at the tip of the penis.

In boys with hypospadias, the opening is located on the under surface of penis. Because of this the urine is deviated downwards towards their feet.

How is hypospadias detected?

Hypospadias occurs in one in 300 male newborns. When the pediatrician checks out the baby, or when the parents bath the baby, the following features can make one suspect hypospadias

Urine opening on the under surface of the penis

Penis being slightly bent downwards

Excess foreskin on the top of the penis



What are the consequences of Hypospadias?

When hypospadias is left uncorrected, the following consequences can develop

1. Unlike the normal lads who can stand and pass urine, hypospadiac lads have to sit; if they stand and pass urine, it goes down the leg.
2. When they get older, because of the bent in penis, sexual activities become difficult.

Also they have much lower chance to have children, as they can't deposit the sperm normally. The sperm leaks out through the opening located underneath.

3. Sometimes the urinary opening is also small, leading to blockage in urine stream. This leaves them at a risk of urinary infection.

Do they have other birth defects? Can the same problem recur in future children?

In general, hypospadiac children do not have other kidney abnormalities. However in 10% of these kids, the testis may not be descended normally. When both testes have not come down normally, they can have associated hormone defects. When the first child or the father has hypospadias, there is a slightly higher chance (7-10%) for the future boys in the family to have the same birth defect.

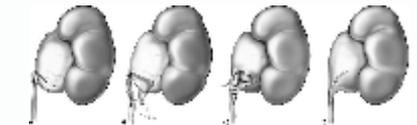
What is the right time to correct hypospadias?

From 6 months onwards, hypospadias can be corrected by an operation. By completing the operation before 2-3 years of age, these children can be toilet trained normally like any other child. Not having an appearance like other boys at school, can lead to emotional problems in these children.

What does the operation involve? What are the complications?

Most of the hypospadias belong to the mild variety and can be operated by a single stage operation. When the opening is too far down from the tip, they might require two-stage operation. The operation is usually done under general anesthesia and a catheter/dressing is left for 5-7 days. Three things are corrected during the operation.

1. The opening is brought to the tip
2. The penis is straightened
3. Excess foreskin is removed (circumcision).

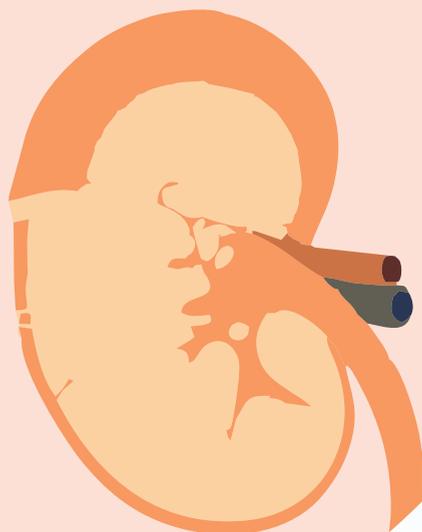


Optical magnification (microscope) and fine suture materials are essential for a successful result. When extra care is taken there is a very good (95%) success rate. In 5% the following complications can occur.

1. The new opening gets small gradually (meatal stenosis)
2. Urine leaks at the original site (Fistula)

Both these can be corrected by another minor operation; so the parents need not have undue concern about this.

DIABETES & KIDNEY



Dr. V. MOHAN M.D., FRCP (London, Edinburgh, Glasgow & Ireland),
 Ph.D. D.Sc. D.Sc (Hon. Causa), FNASc, FASc, FNA
 Chairman & Chief Diabetologist
 Dr.Mohan's Diabetes Specialities Centre,
 WHO Collaborating Centre for Non Communicable Diseases Prevention & Control
 IDF Centre of Education, Chennai
 Email : drmohans@diabetes.ind.in



Diabetic nephropathy (diabetic kidney disease) is one of the chronic vascular complications of diabetes, which tends to develop after several years of diabetes and results in progressive loss of kidney function. The overall risk of developing diabetic nephropathy varies between about 10% of Type 2 (non insulin dependent) diabetic individuals to about 30% of Type 1 (insulin dependent) diabetic individuals. The final stage of nephropathy is called end-stage renal disease, or ESRD. Diabetes is the most common cause of ESRD, accounting for 30-40 percent of all cases of ESRD.

RISK FACTORS FOR DIABETIC NEPHROPATHY

NON-MODIFIABLE	MODIFIABLE
<ul style="list-style-type: none"> ● Ethnic susceptibility ● Genetic predisposition ● Male gender ● High dietary protein intake ● Duration of diabetes 	<ul style="list-style-type: none"> ● Poor glycaemic control ● Elevated blood pressure ● High cholesterol ● Smoking

Symptoms

There are no symptoms in the early stages of diabetic nephropathy. However, a vast array of signs and symptoms may manifest when kidney disease has progressed, which include:

- ▶ Swelling (edema) of the feet and legs and later throughout the body
- ▶ Weight gain due to fluid accumulation
- ▶ Tiredness
- ▶ Poor appetite
- ▶ Nausea or vomiting
- ▶ Itching
- ▶ Increase in blood pressure
- ▶ Troubled sleep and fatigue

Once the kidneys are more severely damaged, blood sugar levels may in fact drop because the kidneys retain insulin in the body and a stage of “burnt out diabetes” may occur. In late stages, patients become severely anemic, breathless and serum potassium levels may rise necessitating urgent dialysis.

Screening for diabetic nephropathy

Screening for nephropathy at its earlier stage of Microalbuminuria, is important because it is reversible at this stage.

Screening schedule for diabetic nephropathy

Microalbuminuria – spot urine	Type 2 diabetes - at diagnosis Type 1 diabetes -3-5 years after diagnosis	Annually
-------------------------------	--	----------

In type 2 diabetic individuals, if Microalbuminuria or later stages of nephropathy are present, the test should be repeated bimonthly in order to classify the level of albumin in the urine. Frequent measurements are recommended as albumin levels vary up to 40% from one day to another.

In type 1 diabetic patients, Microalbuminuria is rarely seen within the first few years after diagnosis of diabetes hence screening is recommended after 3-5 years of diagnosis of

diabetes.

What can be done to prevent diabetic nephropathy?

The keystone in the prevention and management of diabetic nephropathy is **good blood glucose control**. It can prevent the development and slow the progression of diabetic nephropathy, as well as preventing the other complications of diabetes, even if kidney failure has developed in both type 1 and type 2 diabetic individuals. Aiming for Glycated Hemoglobin (HbA1c) levels (which provides a weighted average of the blood glucose level for the previous 3 months) of less than 7% appears to be effective in preventing diabetic kidney disease.

Blood pressure control is the most important factor, to reduce rate of progression of renal disease. Both systolic and diastolic hypertension markedly accelerates the progression of diabetic nephropathy. The recommended target blood pressure is **130/80** mmHg in diabetic patients however, if persistent proteinuria is present, then a more stringent target of <120/75 mmHg is recommended.

With the onset of overt nephropathy, **dietary protein is to be restricted** to 0.8g of protein/kg body wt / day (10% of daily calories). Further restriction may be useful in slowing the decline of GFR in selected patients. It is important to maintain a **low-sodium diet** in diabetic nephropathy. In addition, **controlling blood fat and cholesterol levels** helps slow the progression of diabetic kidney disease. However, nutrition recommendations for patients with renal insufficiency require an individualized approach.

End Stage Renal Disease (ESRD):

When end stage kidney failure is reached, dialysis and transplantation are the only known options of treatment. Early detection and treatment can slow the rate of kidney damage and significantly lengthen the time required to reach the stage of dialysis or renal transplantation. Today, because of better control of diabetes and improved rates of survival following treatment, physicians do not hesitate to offer dialysis and kidney transplantation to people with diabetes and indeed nearly half of all patients in these programs are diabetic patients.

In summary, prevention is the best way to avoid lasting kidney damage from diabetic nephropathy. Once the condition is established, most people tend to progress slowly to chronic renal failure. By tight control of blood sugar and blood pressure, diabetic kidney disease can be prevented in the majority of the patients.

STEPS TO REDUCE THE RISK AND/OR SLOW THE PROGRESSION OF NEPHROPATHY

- Monitoring/screening for Microalbuminuria
- Optimize glucose control
- Optimize blood pressure control
- Angiotension-converting enzyme therapy
- Controlling blood lipids and cholesterol
- Modify diet
- Cessation of smoking



Exercise Prescription for Dialysis Patient



S. NIRANJANI
PHYSIOTHERAPIST &
FITNESS CONSULTANT

The kidneys have important roles in maintaining health. When healthy, the kidneys maintain the body's internal equilibrium of water and minerals (sodium, potassium, chloride, calcium, phosphorus, magnesium, sulphate). Those acidic metabolism end-products that the body cannot get rid of via respiration are also excreted through the kidneys. It also functions as a part of the endocrine system, producing erythropoietin and Calcitriol. Erythropoietin is involved in the production of red blood cells and Calcitriol plays a role in bone formation

Chronic kidney disease can be simply defined as a functional break down of

kidneys. If you reach the point where your kidneys are in a state of failure, you will likely be advised for dialysis treatment by your doctor. Dialysis is when your blood is cleaned of toxins by a machine because your kidney is no longer functioning. There are many causes of this disease. With the help of routine checkups and a healthy diet, it can be controlled and total kidney failure can be avoided. As with most medical conditions normally, people with CKD are recommended to have small regular meals, do energy-increasing physical activities and eat a low calorie diet (food that is low in protein, sodium, potassium and phosphorus counts). Some patients of CKD are also advised to have less intakes of fluids. So exercise and diet is an important factor for patients on dialysis to remain healthy.

Exercise is a very important aspect of our lives and we are designed to be active but it is too often neglected in our culture. There is also a myth that patients with a chronic disease cannot be very active. Many patients who enter dialysis programs have been chronically ill, as a result of diabetes or hypertension, and have concerns as to whether it is safe to increase exercise activity. The facts and observations suggest that dialysis patients can also remain active. Patients on dialysis have a lower exercise capacity than the normal population but they still can do exercises and can be active.

To begin an exercise program start with "warm up" first with stretching exercises. As there is a higher risk of thigh tendon rupture in dialysis patients and although this is associated with osteitis fibrosa, the predisposing causes are not exactly known, later continue with your other exercises. Some of the common exercises for dialysis patients are Flexibility, Strength training and cardio vascular.

FLEXIBILITY

Flexibility will keep your body loose and will give you much needed energy for your treatments. When doing flexibility exercises think "tall" with each movement and breathe deeply throughout. Stretch your neck, arms, shoulders, back and legs regularly. A complete list of static and dynamic stretches can be done which will be gentle on your body, but will still accomplish what you need.

STRENGTH TRAINING

Keeping your muscles strong while you undergo dialysis will make your entire experience more bearable. The intensity of your strength-training sessions will depend on your overall condition, so give your best effort with each exercise whether you are having a high- or low-energy day. You can use light dumbbells, resistance bands of varying thickness or your own body weight to provide resistance to your muscles. Exercises like arm curls, leg extensions with ankle weights, overhead arm extensions and squats will help build your muscles.

CARDIOVASCULAR MOVEMENTS

Cardio exercise is important for your heart and lungs. As a dialysis patient, you will spend

most of your exercise time doing cardio includes brisk walking, jogging, or cycling. You can also play any other sport that gets you moving and that you enjoy.

A program of low-impact exercise with low to moderate intensity is safe and beneficial, that risks can be minimized but it requires screening and evaluation by your doctor. Most patients do not tolerate vigorous exercise and hence it is not recommend. Since decreased maximal exercise capacity is present in dialysis patients, there is no need for high levels of exertion to achieve cardiovascular benefit.

GROUP EXERCISES CAN BE ENLIGHTENED

The ideal exercise program not only achieves cardiovascular fitness but also enables increased physical activity and improves physical functioning in day-to-day activities. This leads to greater independence and a heightened sense of well-being. Exercising in the unit creates peer pressure to stay active and healthy. There is inherent encouragement and support when we see others with the same condition doing well, boosting the general morale of the unit. Individuals generally enjoy exercising in groups and it overcomes the boredom that some feel when exercising alone. So start a new exercise programme under the guidance of your Doctor and your physiotherapist.

There have been many researches going around with low and moderate intensity exercise which suggests that the ideal time to exercise is during therapy. Patients are achieving their ideal body weight and are not under the cardiac strain of fluid overload

and do not have the drained feeling that sometimes occurs immediately after dialysis. The goal for exercise is 30 minutes per session and patients often need to build up to this. Dialysis patients should never be prescribed exercise based upon their heart rate. Instead, one must monitor for signs and symptoms of exertion.

SIGNS AND SYMPTOMS TO LOOK FOR DURING EXERCISES

When exercising you must be able to converse comfortably during the exercise therapy. Light-headedness, dizziness, leg cramps, palpitations, nausea, chest discomfort, pain or pressure and unusual breathlessness are indicators that exercise should immediately be discontinued and should be re-evaluated. In addition to the warm up mentioned above, you should also do cool down for a few minutes rather than stopping exercise abruptly. This avoids blood pooling. Diabetics taking insulin must adjust their dose downward when exercising since activity increases glucose uptake by cells. Hypoglycaemia may occur up to 24 hours following activity and should monitor your blood sugars frequently when initiating any new program that involves activity



There are many reasons why people with chronic kidney disease (CKD) often lose fitness and have increasing difficulty performing normal daily tasks, but new research shows scientific evidence for the benefits of regular exercise for people with CKD, including those with a kidney transplant. They can improve their physical fitness, walk further, have healthier blood pressures, healthier heart rates, higher health-related quality of life scores and better nutritional characteristics compared to those who don't exercise.

CKD is a worldwide public health problem and a person is said to have CKD if they have damaged or poorly performing kidneys where the effects last for more than three months. There are many causes of damage, including high blood pressure, diabetes and rheumatic diseases. Their muscles tend to tire quickly, which reduces the amount of exercise they do, but this then further reduces their fitness. Adults with CKD but who do not yet need dialysis, patients on dialysis and kidney transplant recipients all are benefitted from exercise, but different types of exercise produced different types of benefit to the patients.

The next major part which plays in well being is the Diet. Always remember to consult your Doctors, Physiotherapist and Dietician before you plan for your exercises and diet pattern.

Few diet tips are like choose and prepare foods with less salt and sodium. Buy fresh food more often. Sodium (a part of salt) is added to many packaged foods. Use spices, herbs, and sodium-free seasonings in place of salt. Check the Nutrition Facts label on food packages for sodium. A Daily Value of 20% or more means the food is high in sodium. Try lower-sodium versions of frozen dinners and other convenience foods. Rinse canned vegetables, beans, meats, and fish with water before eating.

Eat the right amount and right types of protein. Eat small portions of protein foods. Protein is found in foods from plants and animals. Talk to your dietician about how to choose the right combination for you. Animal-protein Foods like | Chicken | Fish | Meat | Eggs | Dairy and

Plant-protein Foods | Beans | Nuts | Grains.

Choose foods that are healthy for your heart. Grill, broil, bake, roast, or stir-fry foods, instead of deep frying. Cook with non-stick cooking spray or a small amount of olive oil instead of butter. Trim fat from meat and remove skin from poultry before eating.

The advantage of exercise and proper diet improves the feeling of well being. Regardless of one's level of illness, a program to maximize activity is generally rewarding. So go ahead and plan your exercise and diet for a better living.



Ingredients

- Lemon : 2nos
- Coriander Seeds : 1ysp
- Fresh ginger : 1'
- Salt : To taste
- Sugar : to taste

(Can substitute the sugar with honey or jaggery)

Method

- Grind the coriander seeds, cumin seeds and ginger, adding a little water.
- Filter the mixture.
- Extract the lime juice and mix with two glasses of water.
- Add a little of the spice mixture, salt and sugar.
- Mix well and check for taste.
- Serve chilled with ice.



IT INNOVATION OF THE MONTH

DIGITISING PERSONAL HEALTH RECORDS

Shri L. Pandiaraj,
Manager Corporate Office IT Department
STAR HEALTH AND ALLIED INSURANCE CO LTD



It is during times of need like a medical emergency that one desperately searches for the past medical records. It is difficult for a person in a medical emergency to even remember his blood group far less about his medical condition. Technology has made it possible for us to store the medical records in a digitized form which can be accessed with the click of a button irrespective of the time or place. What a great boon this brings to the attending doctor who can start the treatment straight away not wasting the precious moments of the golden hour in routine investigations and of course to the patient it is indeed a precious gift – a new lease of life.

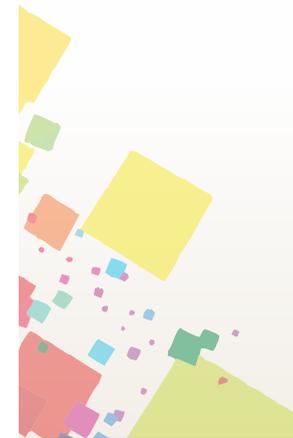
A health record is a primary tool a physician uses to understand the health status of a patient and to monitor the changes from time to time. Personal Health Record is an electronic document which stores demographic information about the user, the physical and medical history, clinical and hospital notes and diagnostic test results which can be updated from time to time. The uniqueness of the PHR is that it can be accessed online from anywhere and at any time.

Star Health, always the forerunner in innovations to bring to the plate of its customer. The need of the hour has thoughtfully tied up with Bee Personal Health Record Services Limited, a Hyderabad based Company to maintain the personal health records of its customers in electronic form. The customer needs to register for the service through the Bee PHR website and would be allotted an ID and password using which the personal health details and records can be uploaded in the data sheet. The user can access the records at any time using ID and also download any of the records stored. Star Health has paid the first year subscription for its customers who avail of this facility.

The process is very simple. The customer who has taken a health policy with Star Health can opt for the facility by visiting its website www.starhealth.in and selecting the 'Star Exclusive Services' at the bottom of the page. This would take the user to the page where the unique services offered by Star Health to its customers are listed out. The user clicks on the icon 'Personal Health Records' and goes on to provide very basic information on the policy taken by and immediately thereafter the data entered by the customer is validated and a unique Reference number is mailed to his/her mail ID.

The customer logs on to the website of Bee PHR www.beephr.com and clicks on the icon meant for the Star Customers. The customer is taken through a simple registration process at the end of which they are allotted a User ID and Password. They can thereafter proceed to use the facility by building up their medical records and uploading the relevant documents. Bee PHR assures safety and integrity of the data.

Star Health is confident that this facility will be used by its customers proactively for monitoring their health regards and wishes its customers good health now and at all times to come.



24x7 Free Expert Medical Consultation Over Phone



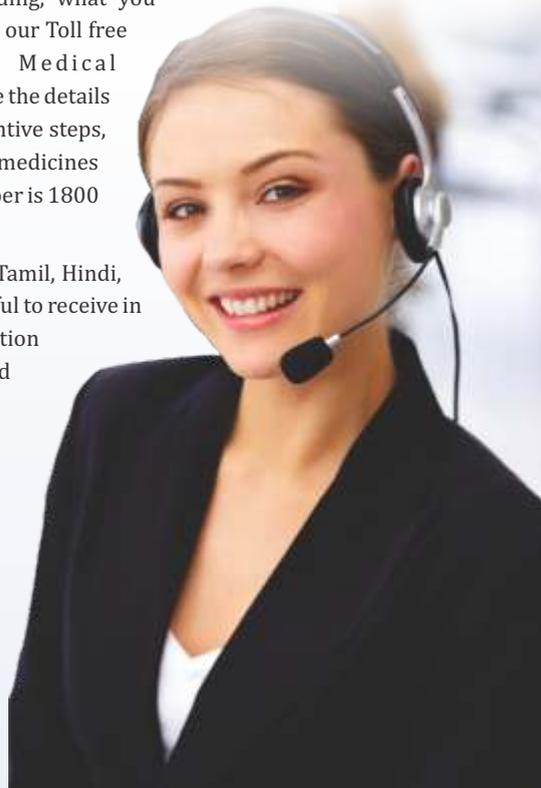
It has been our motto to ensure preventive care information and assistance for good health. Our policy holders can refer the health magazine and the new initiative is 24x7 free expert medical consultation over phone.

When do you utilize this service

Whenever you would like to visit a doctor, say, for a common ailment viz, cold, cough or body pain, before proceeding, what you can do is to call our Toll free number. The Medical personnel will take the details

from you and you will be advised for a simple preventive steps, over the counter medicines or suggest you to go for a medicines or to go for a medical consultation. Our Toll free number is 1800 425 2255 and it is mentioned in the policy document.

Language: The receiver of the call will converse in Tamil, Hindi, Malayalam and of course in English. We will be thankful to receive in English. We will be happy to receive your communication on any suggestions to make the system better and more effective to the editor of this magazine at editor@starhealth.in



Single protection,
wider coverage for entire family

Presenting

Family Health Optima

Peace of mind

Your family is your heart beat. It's your lifeline. It's where you draw your strength from. And it's where your happiness is. To ensure your happiness stays for life, Star Insurance presents a unique Family Health Optima - A Single Sum Insured Plan that covers your entire family. It saves you from taking new additional health protection plans. And from increasing your premium too! The best is, it comes loaded with a world of benefits. Come check it out.

Highlights of Family Health Optima

- ★ Single Sum insured for entire family
- ★ Pre & Post hospitalization cover
- ★ In-patient hospitalization cover
- ★ Nursing expenses
- ★ Surgeon's & Consultant's fees
- ★ Anaesthetist's & Specialist fees
- ★ Cost of medicines and drugs
- ★ Automatic Restoration of Sum Insured once the limit of coverage is exhausted

Eligibility - Any person aged between 5 months and 65 years residing in India

The Health Insurance Specialist

SMS "STAR" to 56677 | www.starhealth.in | Toll Free: 1800 425 2255



REGD & CORPORATE OFFICE: 1, New Tank Street, Valluvar Kottam High Road, Nungambakkam, Chennai 600 034

For more details on risk factors, terms and conditions please read sales brochure carefully before concluding a sale. SHAI/2012-13/PRINT/006

Insurance is the subject matter of solicitation

alaknanda