Body Basics

Chronic kidney disease is a progressive loss in kidney functions over a period of months or years. The symptoms of worsening kidney function are non-specific and might include feeling generally unwell and experiencing a reduced appetite. Often, it is diagnosed while screening of people known to be at risk for kidney problems. It is identified by a blood test called serum creatinine.

Symptoms
Polyuria (passing more urine), nocturia (passing more urine during night), puffiness in the face and feet, persistent aches and pains in the joints, high blood pressure, shortness of breath on mild exertion, fatigue due to anemia.

Risk factors
Diabetes, hypertension, cardiac disease, kidney stones, past history of inflammation in the functional unit of the kidney, hereditary polycystic kidney disease.

Treatment
Dialysis at home by peritoneal dialysis, blood-hemodialysis, kidney transplantation. 

Do’s: 1. Follow a low-fat and nutritious diet — whole wheat roti plus vegetables, pulses, fish and salads. Diabetics should avoid excess sugar, carbohydrates, potatoes, white bread, bakery items, vanaspati ghee, etc. 1. Take your prescribed medications regularly. 1. Monitor your blood pressure, blood sugar on a regular basis. 1. Keep your body fit. Have a fixed routine of physical activities that you can do without undue exertion. 1. Have a positive frame of mind. Negative synergies will aggravate your disease process. 1. Regular relaxation techniques like yoga, pranayam should be practised.

Don’ts: 1. Avoid dehydration 1. Avoid unnecessary radio contrast dyes like CT scans and angiographies. 1. Avoid a high protein fatty diet. 1. Consult your physician before taking any new drug, especially painkillers like Brufen, Voveran, Nimulid, etc. 1. Avoid depressing thoughts and stress. It decreases the immunity levels and well-being of the person.

Diet: 1. Avoid high intake of protein food and supplements. Foods like eggs, chicken, fish, paneer, milk products are must-haves for a balanced nutrition. 1. Potassium has to be restricted in diet. It is present in high amount in fruits, nuts and green vegetables. Potassium can be removed from the vegetables by leeching. 1. Use low sodium salt instead of cooking. 1. Avoid cakes, pastries, biscuits, squash, papads, pickles, salted chips, nuts, popcons as they are sources of very high sodium. 1. Avoid commercial soft drinks and proprietary drinks (they are high in sodium/potassium). 1. Avoid dried foods like fish, fruits, readymade soups and canned foods as they are high in potassium.

(Inputs from Dr Sunil Prakash, head nephrology and transplant services, Artemis Health Institute, Gurgaon)
Catch the cyber thief

Once upon a time, it was the fencing and financial establishments that worried about cyber security. Today, cyber security is of concern to almost every home. More people than ever before have online data that needs to be secured so the loss of a password can be damaging, if not devastating.

Consider this. If information such as date of birth or credit card number is stolen, there is immense potential for misuse. It can be emotionally upsetting if the account holder loses access to websites containing their photo albums.

Add to that the possibility of someone morphing personal photos with malicious intent. Is it any wonder then that popular networking sites and email service providers have been ramping up security?

In September, Hotmail added a “Trust PC” security feature. John Scarrow, general manager of Microsoft safety services announced it in this way: “It lets you link your Hotmail account with one or more of your personal computers. If your account has been hacked, you can regain control by resetting your password on your PC and we will know you are the legitimate owner.”

HDFC bank and Yahoo! sites use text or image authentication so that users can be sure they are accessing a genuine website rather than fraudulent look-alikes. Two years ago, Yahoo! introduced a “sign-in seal” whereby the user creates a seal, which could either be text or an image. At login, the unique seal appears, confirming the Yahoo! site. It’s specific to the computer; so each time a new PC is used, a new seal has to be created.

So too HDFC Netbanking, which asks the user to confirm an image and text he has earlier agreed to. It could, for example, be the Taj Mahal. This image can be changed by clicking on the “Modify Secure Access Profile” link.

SSL and HDFC, among other banks, also offer the option of entering the password on a virtual keyboard, using a mouse. This is meant to pre-empt hacker software that can track keyboard strokes.

In May, Facebook introduced login notification. After the user enters their password, they are prompted to register the computer. This offers a two-fold protection. Even if the password is stolen, the cyber thief will have to register the computer in order to access the account. If and when he does this, the legitimate user will get to know immediately because he is sent an SMS or email.

Facebook also rolled out a unique feature called “one-time password” in October. While launching it, product manager Jake Brill explained, “If you have any concerns about the security of your computer while accessing Facebook, we will text you a ‘one-time password’ to use instead of your regular password that expires in 20 minutes.” However, this feature is only available in the US.

Gmail offers tight security features as well. The “last account activity” is displayed at the bottom of each Gmail page. It could go something like this: “4 minutes ago at (IP address).” If the same account is open elsewhere, a notification appears alongside. It also provides a link to “details” of the date, time and location of the previous 10 account activities, along with the device used to access the account.

Some sites also show an alert for “unusual activity,” ie if it’s been accessed from a place not normally used.

Facebook has made this feature tighter – if the account is used from another computer, the user is prompted to enter additional personal details.

Both Facebook and Gmail also have a “remote logout” feature. For example, if you have forgotten to log out from your office computer, you can simply go home and log out. So if someone has stolen your password and opened your account, he will reach a dead end.

With login breaches increasing over the last two years, security experts warn users to look for safety devices on their network platforms, enable them, and be on the alert for any unusual activity.
Was north-south divide behind IIT-K girl’s death?

G Arun Kumar  |  TN

Hyderabad: Was it regional bias against a student from rural south India that forced Nalgonda girl Saale Madhuri to end her life in IIT-Kanpur earlier this week? Her family and relatives said Madhuri was under tremendous pressure as she faced taunts from other students.

Mother Shantamma said her daughter had been a bright student right from her school days. Ruling out that her daughter could not take the pressure of exams, the reason cited by IIT-K authorities, she said: “Madhuri used to call me often expressing her desire to come back unable to take the harassment. But I kept goading her to finish her B Tech course,” she said.

Madhuri, 22, a final year student, hanged herself in her hostel room two days ago. Her mother ruled out IIT-K authorities’ explanation that her daughter could not take the pressure of exams.

The suicide of Madhuri is the eighth such incident at the prestigious institute in the past five years. Findings of inquiry committees, set up by the institute to ascertain the causes, have never been made public. A former student on condition of anonymity said that though some students were made members of the inquiry committees, they were never called for any meetings.

“Such committees are an eyewash, they are not even informed about the findings of the panel,” he said.

Students admit that academic progression rules are stringent across all IITs. “A student from the south who may be brilliant is bound to struggle in the north-dominant setup. But one should realise that IIT is not the end of the world,” a student of Hyderabad pursuing his B Tech in IIT-Bombay told TOI on phone.

IIT-K registrar Sanjeev Kashalkar said a three-member committee was set up to probe the circumstances that led Madhuri to commit suicide. He said Madhuri had an excellent academic record.

“There was no inkling that she was suffering from depression,” he said.
Ambedkar varsity to have Indian dress at convocation

Press Trust of India

Lucknow, Nov. 20

Following the advice of former President APJ Abdul Kalam during a convocation ceremony held last month, Babasaheb Bhimrao Ambedkar University here has decided to do away with the colonial legacy of “black gown” as the convocation outfit.

The academic council of the University in its meeting here yesterday decided to do away with the ceremonial gown worn during convocations through ages and instead decided to opt for a colour code.

White colour has been set for the convocation function with the choice of the outfit, which could be anything from shirt-trouser to salwar-kameej, kurta-pyjama or sari, University sources said.

Former President APJ Abdul Kalam during the third convocation function of the University last month had described the gown as British and said that a nice Indian dress should replace them.

Attending the convocation, Kalam had said that an Indian dress would be better in place of the old heavy gowns used during such functions.

"...see all of you graduating students this nice gown and cap, this gown should go... this gown is British. We should have a simple Indian system may be a nice angavastram or a lucknavi dress, a good dress that is lighter and suitable for all seasons ... hope that chancellors and vice-chancellors would consider it," he had stated.

Earlier a similar stand was taken by Union Minister of Environment Jairam Ramesh, who had removed his robe in Bhopal to prove his point.
RAGGING MENACE

Student falls off building in Bengal, in coma

HT Correspondent
letters@hindustantimes.com

KOLKATA: In a ragging incident, a first-year student of an engineering college in Bankura district hurt himself while falling from the third floor of a building on Thursday and is now in a coma at a hospital.

However, it is not clear whether he was thrown off the third floor or he himself jumped to escape the torture.

Ujjwal Kumar Anand, a student of computer engineering at the Bishnupur Mallabhum Institute of Technology, 200 km from Kolkata, suffered head injuries and was admitted to the Mission Hospital in Durgapur at around 2 pm on Friday.

"His condition hasn't improved. He has been kept on ventilation," said Prabir Mukherjee, hospital chief executive officer, on Saturday.

Ujjwal's father, Bimal Kumar, who rushed to Durgapur from Bihar on Friday afternoon, has alleged third-year students pushed his son off the third floor around 11 pm on Thursday.

He has filed an FIR against some third-year students at the Bishnupur police station.

Principal Smaran Kumar Sanyal said the institute had lodged a police complaint and suspended two third-year students.
Mysteries of human brain unravelled

SCIENTISTS SPEAK Experts debunk myths, explain brain’s healing ability and power of dreams

HT Correspondent

NEW DELHI: The human brain can heal itself, lie detector tests don’t work, and scientists still don’t know what dreams mean, according to a group of scientists who tried to unravel the mysteries of the human brain at the Hindustan Times Leadership Summit on Saturday.

The human brain is more malleable than the brains of monkeys or rats, and can repair itself after an injury, said Pawan Sinha, an associate professor of vision and computational neuroscience at the US-based Massachusetts Institute of Technology.

Sinha and his team discovered the brain’s healing abilities after they started Project Prakash, which has helped restore sight to more than 700 children.

The results have already had an impact on how doctors treat children, Sinha said. "Ophthalmologists now provide treatment [for blindness] regardless of a child’s age." The research done through Project Prakash could shed light on how illnesses like autism develop, he said.

A new treatment known as deep brain stimulation, which works by passing an electrical signal through the brain, could help treat everything from depression to spasms, said Ravi Gopal Verma, professor and head of the neurosurgery department at the Bangalore-based MS Ramaiah Medical College.

Verma recently used the technology to cure a woman who suffered muscle spasms that wouldn’t allow her to eat, sit up or use the bathroom on her own, he said.

The scientists also debunked popular myths about how the brain works.

"Even the best technology cannot distinguish between a truth and a lie," said Sinha, rubbing the use of these tests in legal cases.

"We have very little understanding of dreams," said Jitendra Sharma, professor at the US-based Harvard Medical School.

But suppressing dreams does hurt the brain.

"Dreams aren’t useless," Sinha said.

One piece of popular wisdom — that we use only 1 per cent of their brains — was just urban legend, though.

"All of our brains are actively used," said Sinha. "If we were meant to use only 1 per cent of our brain, evolution would have made the brain a lot smaller."
Surprise at a Comet visited by NASA: A Snowstorm

NASA photos show that Comet Hartley 2 is spewing ice. They showed bright jets coming off a rough surface.

KENNETH CHANG

A PEANUT-SHAPED comet was spewing hundreds of tons of fluffy ice chunks every second as a NASA spacecraft swung by it two weeks ago.

"To me, this whole thing looks like a snow globe that you've simply just shaken," Peter H. Schultz, a Brown University professor working on the mission, said Thursday during a news conference. The Deep Impact spacecraft passed within 535 miles of Comet Hartley 2 two weeks ago, producing a series of photographs that showed bright jets coming off a rough surface.

"We're not seeing hail-size softballs or even ice cubes," said Jessica M. Sunshine, a deputy principal investigator on the mission. "What we're seeing are fluffy aggregates of very small pieces of ice. And so, they're akin more to maybe a dandelion puff that is very lightly broken apart."

The carbon dioxide jets are coming off the two lobe-shaped ends of the comet, which is just three-quarters of a mile long. The spacecraft also found large amounts of water vapor and no carbon dioxide emanating from the central narrow waist region between the two lobes. This may mean that, for reasons not yet deciphered,

What fascinated the mission scientists most was that the chunks of water ice in the jets were not being lifted off the surface by the force of water vapor being blown out by the sun, but rather by jets of carbon dioxide. This was the first time that such carbon dioxide jets had been observed at a comet.

Frozen carbon dioxide—dry ice—turns to carbon dioxide gas at a temperature of about minus 100 degrees Fahrenheit. Water ice stays frozen until it reaches much higher temperatures. Thus, it appears that the carbon dioxide gas on the comet is blowing apart the still-frozen water ice, along with dust particles, and sending it into space.

The scientists who analyzed the photos of Hartley 2 said that the frozen carbon dioxide within the comet must date from the beginnings of the solar system, because once it turns to gas, it disperses into space. "If it's there, it's primordial," Lori M. Feaga, another member of the science team, said in an interview.

While the bright specks seen in the images ranged in size from golf balls to perhaps basketballs, the spacecraft did not suffer any damage as it flew through the storm at a speed of 27,000 miles an hour.

From the absorption of light by the specks, the scientists deduced that the chunks were not solid ice. The middle part of the comet does not contain much carbon dioxide, and thus the water ice in it can warm into vapor.

"We wouldn't expect this at all," Sunshine said. "This comet is doing two things at once."

The Hartley 2 findings differ significantly from what the Deep Impact spacecraft found when it visited Comet Tempel 1 five years ago. At Tempel 1, Deep Impact found water vapor emissions similar to those coming from the middle of Hartley 2, but no carbon dioxide jets and no visible chunks of water ice.

After the Tempel 1 visit, NASA decided to reuse the spacecraft, which still had ample maneuvering fuel left, to head to a second comet. The mission was renamed EPOXI, an amalgamation of two acronyms: EPOCH, or Extrasolar Planet Observation and Characterisation, which has been using one of the spacecraft's cameras to look at stars known to have planets, and DIXI, or Deep Impact Extended Investigation, for the second comet fly-by.

"It has emphasised how different comets are from one another and how understanding them is a much more complex problem than the rather simplistic approach I like to normally take," said Michael R. A'Hearn, EPOXI's principal investigator.
Pranab sees major role for private sector in higher education

Staff Reporter

KOLKATA: Union Finance Minister Pranab Mukherjee advocated here on Saturday the necessity of public-private partnership for achieving the Centre's target of universal access to secondary education, as well as increasing the enrolment ratio in the higher education sector.

Delivering the keynote address at a national seminar on Education-Industry Cooperation, organised by Roy's Institute of Competitive Examination (RICE) Group and Adamas Knowledge City here, Mr. Mukherjee said the Centre was taking “conscious policy decisions to progressively involve the private sector in meeting the challenges and requirements of human resource development”.

Enrolment ratio

Pointing out that the Centre aimed at a 15 per cent gross enrolment ratio in higher education by the end of the 11th Plan, and 21 per cent by the end of the 12th Plan, he said that though more Central universities and technical institutions like Indian Institutes of Technology and Indian Institutes of Management are being set up, yet mobilisation of funds was a challenge.

Mr. Mukherjee also highlighted the importance of setting up of 2,500 modern schools across the country on the basis of PPP to attain the universal access goal by 2017 and universal retention goal by 2020 in secondary education.

“To address the challenge, a customised PPP mode needs to be explored without diluting the regulatory authority oversight of the government.”

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ऑनलाइन होगा AIEEE एग्जाम
ऑल इंडिया इंजीनियरिंग प्रूज्युस एजामिनेशन (AIEEE) इस बार ऑनलाइन लिया जाएगा, जिसके लिए आप मंगलवार से अप्लाइ कर सकते हैं। एग्जाम 24 अप्रैल 2011 को होगा, जिसमें पहले आओ पहले पाचकों के आधार पर एक लाख स्कूल्स को ऑनलाइन एग्जाम देने का मौका दिया जाएगा। आवेदकों का सिलेबस देश के 20 शहरों से पहले पांचव-पांचवे हजार कैंडिडेट्स के तौर पर होगा और बाकी बचे कैंडिडेट्स ऑफिकल एग्जाम दे सकेंगे। इसके लिए 15 दिसंबर से फॉर्म मिलने शुरू होंगे। कैट के बाद यह दूसरा ऐसा कॉम्पिटिटिव एग्जाम है, जो ऑनलाइन लिया जाएगा।
Mecca of IIT-JEE tutorials losing its winning ways

Poor Results, High Cost Of Living Hit Kota

TANDEEP outside the three-storey hostel for students he runs in Kota, 250 km south of Rajasthan’s capital Jaipur, takes a look up at the sky worrying about the future.

Until a few months ago, all his troubles seemed far away, in this hub of institutes that train students for entrance exams to some of the most reputed academic institutions in the country, especially IITs. And there was no reason to lose sleep because since the mid-90s, things only got better for providers of tutorial services or related businesses such as Jain. Till this year, that is.

In the past few years, nearly 30% of those selected to IITs were from Kota institutes. In 2008, six of the top 10 ranks in IIT-JEE were from institutes in Kota; last year the figure fell to three, and this year to 2.

Jain knows it: he has to baton down the hatchet because there is a massive slide in students coming to Kota.

WHY? WHAT’S HAPPENING?

But before that, how did Kota become home to the country’s largest cluster of tutorial service providers?

The year was 1996, and a huge chemical factory of JK Synthetics in Kota doused down. Many engineers lost their jobs and left town. Several of them, however, decided to stay on, and to make both ends meet, started giving classes to students; such as Dr VK Bansal’s, who began to offer private tuition to 10 aspirants for a fee. Very soon, more engineers entered the fray and the rate of students getting selected to IITs from Kota institutes rose.

To sustain the momentum, they updated their course material, revised methodology, hired experts and soon, the entrance exams coaching business in Kota became an organised industry.

Averaging rough estimates, this industry, including related businesses, generated revenues of Rs 660 crore last year.

The tale of Kota is that of a boom in less than a decade, attracting even the attention of private equity funds.

EARLIER this year, Milestone Reliance Investors Advisers, a joint venture between Milestone Capital and Reliance Enterprises, invested Rs 60 crore in Resonance, a Kota-based tutorial institute. Its competitor Career Point went a step ahead. After raising Rs 50 crore through a private equity investment by Franklin Templeton Mutual Fund in July 2009, it went public, raising Rs 115 crore.

But the overwhelming investor response to Career Point’s IPO doesn’t mirror, in any way, the mood on the ground in Kota, headquarters of the institute and home to as many as 25 other major tutorial services centres.

DREAM RUN NO MORE

Last year, there were 1.25 lakh "outstanding" students in Kota—that is the total number of students who came from elsewhere and joined coaching classes and schools here. This year, there was a dip. Until this year, for a few years now, an average, as high as 30,000 new students landed yearly in Kota, say industry insiders. This year, only around 8,000 new students arrived, resulting in a huge decline in the total number of students, which has, in the process, also hurt allied services such as boarding and catering.

It is not just the recent decline in number of students who opted for the entrance exams into medical colleges that is to blame for Kota’s fall from grace, say tutorial service providers. Most of them also attribute the phenomenon to the steep rise in the cost of living here.

A student now has to pay Rs 3,000 a month for a non-air-conditioned single-room in areas close to tutorial institutes. The rates have doubled from a few years ago, say people close to the matter. For air-conditioned rooms, they pay Rs 4,000 now, compared with Rs 3,000 a few years earlier. "The cost index has gone beyond the affordability limits of most parents. On average, the living cost of a student in Kota comes out to be Rs 4,5-5 lakh per annum which includes Rs 70,000 for IIT coaching, Rs 35,000 for school uniforms, Rs 1.2 lakh for boarding and lodging and Rs 50,000 for miscellaneous expenses," says Pranod Bansal, chief executive of Bansal Classes.

Students typically join these training institutes in May for a two-year schooling and entrance exams training course. Such centres also offer crash courses in the run-up to entrance exams held in June.

COUNTING THE COST

Kishore Khambata, who rents out one of his houses to students, says costs have risen due to the entry of "big players"—the builders—in the hostel business. "They bought land at exorbitant prices near these institutes, constructed hostels with modern facilities. Now they are left with no other option but to ask for high rents so that they break even quickly. This probably has turned off aspirants who can’t afford to stay in the vicinity of institutes," says he.