

which generates on earth among others after long bed-riddenness or in ageing. For that the DLR researchers have established a kind of sleeping laboratory in which the experimenter are confined to bed for months regularly. We want to understand that “a long bed rest of the type changes in the body and how one can prevent these changes” says Gem Gerzer, the manager of the institute. Atmospheric humidity, oxygen, nitrogen and carbon dioxide content surrounding light or also temperature can be exactly put in with that special ceiling illuminates the experimenter with different wavelengths.

“Astronauts are just like shift workers as hospital personnel or assembly line worker” says the Chief Re-

searcher. Which light wave works upon favourably on the rhythm of shift workers is therefore interesting for the worker in space as also on earth? Further studies are devoted to the joints and muscle disintegration or different nutritional forms.

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Source: *Betruhe im Dicuste der Wissenschaft*, VDI Nachrichten, 19 July 2013, Nr 29/30 Seite 18, Technik & Wissenschaft.

Japanese Encephalitis

Many places in South and North 24-Parganas bordering Calcutta have paddy fields and pigs. Areas within 4-5 km of these are vulnerable to Japanese Encephalitis. The symptoms are rapid onset of high fever, headache, stiffness of neck, disorientation, seizures.

How the virus is transmitted? Each fresh outbreak involves a complex chain: wild water birds (hosts) to mosquitoes (vectors) to pigs (amplifying hosts, where the virus reproduces heavily) to mosquitoes to humans who don't infect other humans. The mosquitoes can fly 4-5 km. The infection is diagnosed from blood samples or cerebrospinal fluid, CSF. For patients there is no antiviral treatment. Doctors try to relieve symptoms and stabilize the patient. How can the disease be prevented?

By controlling the mosquito population, isolating pigs and avoiding mosquito bites through the use of repellants, nets, long sleeved clothes, coils and vaporizers.

By getting vaccinated for both children and adults. Two types of vaccines are available in India, costing about Rs.70/- per dose. Two doses should be administered a month apart. It takes two more months to gain immunity. Since the disease strikes in summer, the safest bet is to take the doses in late winter and early spring. The initial immunity lasts two years. A booster dose after two years gives lifelong immunity.

Source: The Telegraph

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