

HIB VACCINE

A critical ally in Asia’s effort to reduce child deaths

STAR HEALTH DESK

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New study shows Hib vaccine protects children from significant burden of life-threatening pneumonia and meningitis, says a press release.
Study shows Hib vaccine could prevent about 1/3 of life-threatening cases of bacterial pneumonia, the leading infectious cause of death in Asian children.
Findings confirm burden of Hib pneumonia and meningitis grossly underestimated in Asia.
A new study from Bangladesh published recently in The Pediatric Infectious Disease Journal shows that routinely vaccinating infants against *H. influenzae type b* (Hib), a bacterium that causes deadly Hib pneumonia and meningitis, could save hundreds of thousands of children in Asia.
Results showed that routine immunisation of infants with a Hib conjugate vaccine prevented over one-third of life-threatening pneumonia cases and approximately 90 percent of Hib meningitis cases. A similar impact would

be expected in other parts of the region.
Although countries in Asia with high mortality rates have long known that pneumonia and meningitis are a significant concern, many assumed that Hib was not a major cause.
This vaccine study builds the evidence of the real burden of Hib pneumonia and meningitis as has been shown in other studies in Chile and Indonesia, that is that the proportion of pneumonia and meningitis prevented by the Hib conjugate vaccine is significantly higher than what can be detected through routine surveillance.
“There has been an ongoing disagreement about the total burden of Hib pneumonia and meningitis in Asia, but our findings provide evidence challenging the commonly held notion that these diseases are rare in Asia,” said Dr Abdullah Baqui, Associate Professor, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA.
“Our research shows that routine Hib vaccination is a feasible and highly effective way of preventing death related to Hib pneu-

monia and meningitis and could save the lives of a significant number of Asian children who die under the age of five.”
“Bangladesh views Hib vaccine as an integral tool in our mission to improve child survival in Bangladesh,” said Dr. Md. Abdul Quader Mian, Deputy Director EPI and Programme Manager Child Health & LCC, Ministry of Health, Bangladesh.
“This study corroborates the evidence of previous studies carried out in the country, which demonstrated the significant burden of Hib pneumonia and meningitis. It also confirms the impact this vaccine can have in preventing both death and illness as well as the permanent severe disability caused by Hib meningitis.”
The study was conducted by researchers from International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B), Dhaka Shishu Hospital and John Hopkins University.
Dr. Samir Kumar Saha, Professor and Head of the department of Microbiology of Institute of Child Health of Dhaka Shishu Hospital,

who is one of the authors of the study told The Daily Star that this study will help many countries including Bangladesh to introduce the vaccine and overcome the disease burden.
The vaccine used in the study replaced the routine diphtheria, tetanus and pertussis (DTP) vaccine with a DTP-Hib combination. The combination vaccine did not require additional injections or visits to benefit from the expanded protection.
Bangladesh recently applied for funding from the GAVI Alliance to introduce a DTP-Hepatitis B-Hib “pentavalent” combination which they hope to introduce into the routine childhood immunisation program in 2008.
Despite a growing body of evidence, only 26 percent of the world’s children live in countries with access to Hib vaccine. This means hundreds of thousands of children in Asian countries are currently not benefiting from simple, life-saving vaccine.
These data and other evidence showing the burden of Hib pneumonia and meningitis and the poor outcomes leading to

death and permanent disability were fully reviewed at as part of a WHO-led consultative process in Bangladesh about the introduction of the Hib vaccine.
Other Asian countries in addition to Bangladesh, including Pakistan, Afghanistan, Sri Lanka and Bhutan, have also made the decision to introduce Hib vaccine and applied for support from the GAVI Alliance.
“We are delighted that so many Asian countries are preparing to introduce the Hib vaccine and protect their children against Hib pneumonia and Hib meningitis” said Julian Lob-Levyt, Executive Secretary of the GAVI Alliance.
“This is a clear indication of these governments’ commitment to reduce child mortality.”
The WHO recommends that all countries adopt Hib vaccine into routine child immunisation programmes. They estimate that Hib globally is responsible for 400,000 deaths each year in children under five years of age and around 3 million cases of serious illness resulting in long term consequences such as deafness, learning disabilities,

paralysis and mental retardation.
“This simple, life-saving vaccine can prevent Hib pneumonia and meningitis in children, often called the ‘invisible cause of forgotten child killers’ in Asia,” said Dr. Kent R. Hill, Assistant Administrator, Global Health.
“Immunisation programmes, including Hib, are an essential component of USAID’s strategy to prevent life-threatening childhood infections.
This data is clear - Hib vaccine is an important addition to immunisation programmes through out Asia. Supply studies tell us quality manufacturers from developing countries are coming into the market very soon and prices for this vaccine will be coming down in the very near future.
Now is the time for additional Asian countries to make this important addition to the EPI programmes.



DID YOU KNOW?

An active brain may help keep Alzheimer's at bay

The results of a new study support a number of previous studies that have shown that staying mentally active reduces the risk of developing Alzheimer's disease and the mild impairments that precede the condition.
As part of the Rush Memory and Aging Project in Chicago, more than 700 elderly subjects who were an average of 80 years old underwent yearly testing to detect any mental declines. The subjects were tested for up to 5 years and provided information on any current and past problems with their memory or thought processes.
They were also asked about their activities, such as visiting a library or museum; reading newspapers, books or magazines; attending a concert, play or musical; and writing a letter," Robert S. Wilson told.
Ninety of the study subjects developed Alzheimer's disease. In the current issue of the medical journal Neurology, Wilson of Rush University Medical Center, Chicago, and colleagues report that the frequent participation in activities that involve mental processes was associated a 50-percent reduced incidence of Alzheimer's disease.
A mentally inactive person in old-age was 2.6-times more likely to develop Alzheimer's disease than one who was mentally active, the team found.
This relationship remained after
controlling for past mental issues, lifespan socioeconomic status, current social and physical activity, and also low mental function at the beginning of the trial, investigators report. Frequent mental activities also protected against mild impairments.
"Our results suggest that regardless of how mentally active people have been prior to old age, higher level of mental activity in old age reduces the risk of developing an Alzheimer's disease-like dementia and...impairment," Wilson said.
Brain autopsy performed in 102 subjects who died during the study failed to show a correlation between level of mental activity and neuropathology findings.
It is likely, Wilson said, that mental inactivity is "truly a risk factor for Alzheimer's disease and not simply an early consequence of the disease" — because mental activity was not related to Alzheimer's disease pathology "and people with early Alzheimer's disease symptoms did not show accelerated decline in mental activity."
The findings of this study underscore the importance of being mentally active in old age, the clinicians conclude.
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Source: Neurology

Events

Recently Social Marketing Company (SMC) hosted a ceremony titled “Environment and Health — A Child’s Perspective” at a local hotel to award 12 best artists from an art competition for school children of Dhaka city.

Intensivists gathered to form a society

Intensivists (those who look after critically ill patients) of different government and private hospitals form Dhaka attended a get-together recently at Square Hospital in the city, says a press release.
The meeting was focused on the importance and impact of Intensive Care facilities in Bangladesh. Participants shared their experiences and ideas regarding this service.
A committee was formed to work in view to form an Intensivist Society of Bangladesh.
Prof. Sanwar Hossain, Medical Director of Square Hospital delivered the welcome address. Prof. Shafiqur Rahman, Dean of Faculty, Dept. of Anaesthesiology and Critical Care, BSMMU, Prof. M. Omar Faruk, Head of Dept. of Critical Care, BIRDEM Hospital, Prof. M. Khalilur Rahman, Immediate Past President, Society of Anaesthesiologists of Bangladesh, Dr. Mirza Nazimuddin, Head of ICU, Square Hospital, Dr. (Major) Mujibur Rahman, Head of Anaesthesiology and ICU, Labaid Cardiac Hospital and Dr.M. Muniruzzaman, Head of ICU, United Hospital shared their views in the meeting.
The meeting selected unanimously Dr. Raghib Manzoor as the coordinator among the Committee members.
Doctors working and would like to work in critical care sector in Bangladesh may contact at ccfbd.org@gmail.com for further communication.

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Breathing technique aids asthma

BBC HEALTH
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An old-fashioned breathing and relaxation technique could help those with asthma, research suggests.
In a trial of 85 people with mild asthma, the symptoms of those using the Papworth method alongside drugs were significantly eased.
The 1960s technique involves focusing on the diaphragm while breathing, and emphasises breathing through the nose, accompanied by relaxation training.
It became forgotten as a treatment as medication for asthma improved. Those who continued to rely solely on their medication scored 33.5 in the St George's Respiratory Syndrome Questionnaire — a survey which asks patients questions such as how often they have coughed, wheezed or brought up phlegm.
Those who had used the Papworth method for 12 months scored 24.9 on the scale which measures the severity of symptoms out of 100.
A non-asthma patient is likely to score 11 or 12. The difference of nearly nine points between those who used the technique and those who did not was seen as clinically significant, according to researcher Elizabeth Holloway of the Department of Epidemiology and Public Health at UCL.
Keep breathing
The breathing technique is accompanied by relaxation training and education to help people integrate it into their everyday lives — using it while they sit, stand, walk and talk.
Dr Mike Thomas, Senior Research Fellow at Asthma UK, welcomed the study. "It is also consistent with other studies from Australia and the UK which show that breathing exercises can help to reduce the need for reliever medication and can improve the quality of life of people with asthma. "It is however vital that people with asthma continue to take their prescribed medication alongside any additional breathing training."



NUTRITION TIPS Soy compound may boost bone density

Supplements containing a soy compound called genistein may help increase women's bone mass after menopause, a study suggests.
Italian researchers found that a combination of genistein, calcium and vitamin D helped protect postmenopausal women's bone density better than calcium and vitamin D alone.
In fact, women who took the soy compound showed a modest increase in bone density over two years, compared with a small decrease among women who used only calcium and vitamin D, the researchers report in the Annals of Internal Medicine.
Genistein is a type of isoflavone, plant chemicals that have effects similar to the female hormone estrogen and may have certain estrogen-like effects in humans. The estrogen decline that follows menopause contributes to bone density loss, and some research has linked high soy intake from food to a lower risk of the bone-thinning disease osteoporosis.
However, studies on the effects of soy-based foods on bone mass after menopause have been inconsistent, said Dr. Francesco Squadrito, the senior author on the current study.
“This research is different in that it uses (a) nearly pure chemical from soy that you cannot obtain in sufficient quantities by simply eating more soy products,” explained Squadrito, a researcher at the University of Messina in Italy.
Women in the study took 54 milligrams (mg) of genistein a day — an amount, Squadrito told Reuters Health, that’s equivalent to 2 gallons of soy milk or about 8 pounds of tofu per day.
The study involved 389 postmenopausal women with lower than normal bone mass that had not yet progressed to osteoporosis. The women were randomly assigned to take either genistein or placebo (inactive) pills, every day for two years. Both the genistein and placebo pills also contained 500 mg of calcium and 400 IU of vitamin D.
After two years, bone scans showed that, on average, women who took genistein had gained some bone density in the hip and lower spine, while those in the placebo group had lost bone mass.
An important remaining question, however, is whether genistein actually prevents bone fractures over time.
In addition, a general concern with high doses of estrogen-like isoflavones is whether they might influence the risk of breast or uterine cancers.
In Squadrito's study women on genistein showed no thickening in the lining of the uterus, a sign of adverse hormonal effects. Instead, the main side effects were gastrointestinal problems like indigestion and constipation.
And Squadrito noted that, in general, genistein has shown an “exceptional safety profile” in studies.
Still, he urged some caution in using genistein supplements. “Because this molecule is in very high concentration compared to what you get in actual soy products,” Squadrito said, “women should speak with their doctors regarding the use of any product containing high amounts of genistein.”
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Source: Annals of Internal Medicine

MEDICAL UPDATE Intercytex artificial skin heals wounds in tests

Reuters, London
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A British biotechnology company has developed a long-lasting artificial skin that has produced promising results in healing wounds in early clinical trials.
Scientists said the advance could mark a breakthrough in regenerative medicine.
Intercytex Group Plc, which specialises in cell therapy, said its laboratory-made living skin was fully and consistently integrated into the human body.
The new skin appears to work better than other substitutes tried in the past, which biodegrade in situ after a few weeks.
Results of the tests showed that Intercytex's artificial skin, ICX-SKN, was fully integrated after 28 days, producing a closed and healed wound site.
Intercytex now plans to test ICX-SKN on larger wounds and move on to pivotal clinical trials that would generate sufficient data to seek a marketing license.
Current best practice for serious wounds is to use a skin graft taken from a different part of the patient's own body — but this is a painful process and creates a new wound.
ICX-SKN is made up of a matrix produced by the same skin cells — fibroblasts — that are responsible for laying down the collagen in natural skin. The fibroblasts weave a structure which mimics that found in skin.

FDA clears rapid blood test for malaria

REUTERS, Washington
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A new blood test that can identify malaria infections within 15 minutes won approval from U.S. health officials.
The Food and Drug Administration said the Binax Now test, made by a unit of Inverness Medical Innovations Inc., was faster and easier to use than older methods.
Standard laboratory tests require identifying malaria parasites in a blood sample under a microscope, the FDA said.
The new test provides results from a few drops of blood placed on a dipstick, and can differentiate between the most dangerous malaria parasite and less virulent forms, the FDA said. Results should be confirmed with standard microscopic evaluation.
The Binax Now test was 95 percent accurate compared with microscopic diagnosis, the FDA said.
Deaths can be prevented if malaria is diagnosed and treated early.