

## HIB VACCINE

# A critical ally in Asia's effort to reduce child deaths

### STAR HEALTH DESK

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 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

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 throughout 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 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.

This relationship remained after

Source: Neurology



### 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."

Source: *Annals of Internal Medicine*

## Breathing technique aids asthma

### BBC HEALTH

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.

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