

# FEDERAL NEWS WEEKLY SUMMARY CONTINUED



athletes, according to a study published in the Nov. 20, 1996 issue of the *Journal of the American Medical Association*. The study demonstrated that students in the ATLAS program had enhanced healthy behaviors, reduced factors that encourage steroid use, and lower intent to use steroids. The ATLAS program, created by scientists at the Oregon Health Sciences University and led by Dr. Linn Goldberg, was funded by a research grant from the National Institute on Drug Abuse (NIDA), National Institutes of Health.

The ATLAS program includes seven 50-minute classes led by coaches and student team leaders. These sessions focus on the effects of steroids, sports nutrition, and strength training alternatives to steroids use. Students also participate in drug refusal role playing and learn about anti-steroids media messages. In addition to the classes there are seven weight room sessions taught by Oregon Health Sciences University research staff. Information is also distributed to parents, and they were invited to a discussion session.

The randomized, prospective study involved 1,506 football players/students from 31 different high schools. This year-long study was the first study to use coaches as members of the drug prevention team. Students filled out confidential questionnaires immediately before and after participating in the ATLAS program and then again approximately 12 months later to measure the effectiveness of the program.

Compared to student athletes who were not exposed to the ATLAS program, ATLAS participants had increased understanding of the effects of steroids, greater belief in personal vulnerability to the consequences of steroid use, improved drug refusal skills, less belief in steroid-promoting media messages, increased belief in the team as an information source, improved perception of athletic abilities and strength training self-efficacy, improved nutrition and exercise behaviors and reduced intentions to use steroids.

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## GROUP B STREP VACCINE SHOWS PROMISE IN CLINICAL STUDIES

■(WASHINGTON) A major step toward developing a vaccine to prevent infections with Group B streptococci bacteria, an important cause of infant disease and death, has been reported by researchers supported by the National Institute of Allergy and Infectious Diseases (NIAID). The study results appear in the Nov. 15, 1996, issue of *The Journal of Clinical Investigation*.

An experimental vaccine against one type of Group B strep stimulated strong immune responses in human volunteers. Later, in laboratory experiments, antibodies isolated from the volunteers neutralized the same type of Group B strep bacteria and prevented infection in newborn mice that were exposed to it.

Ten to 30 percent of all women are asymptomatic carriers of Group B strep, harboring the bacteria in their genital tracts.

During childbirth, the bacteria is transmitted to approximately half of all infants born to these women. Nearly two of every 1,000 infants in the United States develop invasive infections, which can cause pneumonia, meningitis and other serious illnesses, usually within the first three months of life. Half of all infants who develop Group B strep meningitis experience long-term neurologic problems, including seizure disorders and mental retardation. About 10 percent of infected infants die.

For more than a decade, Dennis L. Kasper, M.D., lead author of the current study and his colleagues at Brigham and Women's Hospital in Boston have tried to develop a vaccine that would protect infants from Group B strep by stimulating the production of antibodies in pregnant women. Theoretically, the maternal immunity generated by such a vaccine would cross the placental membranes and protect the newborn for the first few months of its life, when most Group B strep disease occurs.

The Group B strep bacterium is enveloped in a complex sugar molecule called a polysaccharide capsule. Because it is known to play a key role in stimulating the production of antibodies to Group B strep, the capsule is a logical vaccine candidate. However, previous studies supported by NIAID found that immunization with the purified capsule molecule produced insufficient amounts of antibody in human volunteers. Those studies led Dr. Kasper and his colleagues to try to boost the vaccine's performance by chemically linking, or conjugating, the capsule to tetanus toxoid, a protein that has been used to increase the immune-stimulating properties of several other vaccines.

In the current study the researchers compared this so-called conjugate vaccine with its predecessor.

"These findings demonstrate that the antibodies produced by the conjugate vaccine are able to cross the placental membrane and could confer protection against Group B strep to the fetus," says Dr. Kasper.

The vaccine used in the current study was a monovalent product — designed to protect against just one of the various types of Group B strep that cause disease in infants. Ultimately, a multivalent vaccine, providing protection against all types, will be needed. Acknowledging that much more work remains before a Group B strep vaccine

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