

Giving attention to prevention

By Leilana McKindra

Collaboration between the athletics department and the doctoral physical therapy program at Lebanon Valley is capitalizing on cutting-edge research to promote healthier student-athletes by helping them avoid “noncontact” injuries.

Designed to identify student-athletes with an increased risk for suffering noncontact injuries, the Body Armor program is built around two unique, research-based tests – the functional movement screen developed by Gray Cook and the Y balance test invented by Phil Plisky. Both analyze athletes’ movement patterns to determine risk of injury.

The functional movement screen consists of seven basic patterns, including deep squats, hurdle steps and in-line lunges. The Y balance test measures dynamic stability and balance in the lower extremities.

Mike Lehr, director of the Body Armor program and a clinical assistant professor of physical therapy at Lebanon Valley, said while almost all college teams test athletes’ speed, agility and power, few emulate professional sports teams and the military in testing movement patterns.

“These two tests are the only tools of their kind with the research to support them as a way of quantifying movement patterns in athletes,” said Lehr, who noted that individuals identified as at-risk within the tests’ parameters are three to 11 times more likely to sustain an injury.

Body Armor, which is part of an initiative spearheaded by Athletics Director Rick Beard to promote healthier student-athletes, was established in fall 2008.

As part of the program, student-athletes are categorized based on their scores on the functional movement screen and the Y balance test. Student-athletes who experience pain with certain movements are referred to the sports medicine department for treatment. Those diagnosed as being somewhat at risk but pain free are told to proceed with caution, while others are free to practice, train and compete without reservation.

So far, nearly 300 student-athletes in six men’s and four women’s sports have participated in the program. In addition, as part of the school’s service-learning component, 27 Lebanon Valley physical therapy students have contributed 373 hours to support the program.

Lehr used the results from the first two years of testing to establish baseline data. Now he is analyzing data to pinpoint exactly



Two movement-based tests let Lebanon Valley medical professionals diagnose how susceptible student-athletes are to noncontact injuries.

which elements of the two tests and interventions most effectively meet the needs of Lebanon Valley student-athletes.

The end goal, Lehr said, is to integrate the program into various aspects of the athletics department. For instance, preliminary results indicate that the Y balance test could be added to pre-participation physicals, while specific exercises associated with the functional movement screen may be integrated into teams’ strength and conditioning programs.

Although Body Armor is still evolving, Charlie Grimes, head men’s soccer coach at Lebanon Valley and the athletics department liaison to the Body Armor program, said it already has influenced his team’s performance.

“In just about any sport, you’re going to have injuries from time to time, but this program certainly has helped us decrease the occurrence of injuries and increased the overall physical preparedness of our players,” he said. “I’m a believer.”

Lehr sees Body Armor as more than

just a program that promotes healthier Lebanon Valley student-athletes. The biggest predictor of injury is previous injury, he said, and the program gives coaches, administrators and medical professionals a common way of deciding when a student-athlete is ready to return to competition after sustaining an injury.

Also, once the program is fully incorporated into the athletics department, he believes it could take the pressure off the sports medicine and athletic training staffs by decreasing the number of student-athletes who sustain noncontact injuries and require treatment.

Although Lehr has tailored Body Armor specifically for Lebanon Valley student-athletes, he said all it takes is individuals wanting to work together to establish similar efforts at other schools.

“If people want to work together, they can put together resources and generate an environment that fosters a healthier student-athlete,” he said.

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– Mike Lehr, director of the Body Armor program and a clinical assistant professor of physical therapy at Lebanon Valley

NCAA 2010 THIRD-QUARTER CALENDAR

AUGUST

MEN'S LACROSSE RULES COMMITTEE

When: August 1-4
Where: Indianapolis

DIVISION III PRESIDENTS/CHANCELLORS ADVISORY GROUP

When: August 11
Where: Indianapolis

DIVISION I BOARD OF DIRECTORS

When: August 12
Where: Indianapolis

DIVISION III PRESIDENTS COUNCIL

When: August 12
Where: Indianapolis

EXECUTIVE COMMITTEE

When: August 12
Where: Indianapolis

DIVISION I COMMITTEE ON INFRACTIONS

When: August 12-15
Where: Seattle

SEPTEMBER

DIVISION III CHAMPIONSHIPS COMMITTEE

When: September 12-15
Where: Indianapolis

DIVISION I ACADEMIC CABINET

When: September 13-14
Where: Indianapolis

DIVISION I CHAMPIONSHIPS/SPORT MANAGEMENT CABINET

When: September 13-14
Where: Indianapolis

DIVISION II ACADEMIC REQUIREMENTS COMMITTEE

When: September 16-17
Where: Indianapolis

HIGH SCHOOL REVIEW COMMITTEE

When: September 20-21
Where: Indianapolis

MINORITY OPPORTUNITIES AND INTERESTS COMMITTEE

When: September 20-22
Where: Indianapolis

COMMITTEE ON WOMEN'S ATHLETICS

When: September 21-22
Where: Indianapolis

DIVISION I AWARDS, BENEFITS, EXPENSES AND FINANCIAL AID CABINET

When: September 21-22
Where: Indianapolis

DIVISION III INTERPRETATIONS AND LEGISLATION COMMITTEE

When: September 23-24
Where: Indianapolis

NCAA CORPORATE CHAMPIONS/PARTNERS SUMMIT

When: September 27-29
Where: Houston

DIVISION I RECRUITING AND ATHLETICS PERSONNEL ISSUES CABINET

When: September 28-29
Where: Indianapolis

DIVISION I AMATEURISM CABINET

When: September 29-30
Where: Indianapolis

OCTOBER

DIVISION III FACULTY ATHLETICS REPRESENTATIVE INSTITUTE

When: October 1-3
Where: Indianapolis

DIVISION I COMMITTEE ON INFRACTIONS

When: October 14-17
Where: Indianapolis

NCAA WOMAN OF THE YEAR BANQUET

When: October 17
Where: Indianapolis

DIVISION I LEGISLATIVE COUNCIL

When: October 18-19
Where: Indianapolis

DIVISIONS II AND III MANAGEMENT COUNCILS

When: October 18-19
Where: Indianapolis

DIVISION I WOMEN'S BASKETBALL COMMITTEE

When: October 18-20
Where: Indianapolis

DIVISION I BOARD OF DIRECTORS

When: October 28
Where: Indianapolis

DIVISIONS II AND III PRESIDENTS COUNCIL

When: October 28
Where: Indianapolis

EXECUTIVE COMMITTEE

When: October 28
Where: Indianapolis

DIVISION II FACULTY ATHLETICS REPRESENTATIVE INSTITUTE

When: October 29-31
Where: Indianapolis



Seattle