Study correlates fat, heart disease

By INES PINTO
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NEW ORLEANS — An LSU researcher said Monday chest and stomach fat is more likely to cause heart disease than fat on other parts of the body.

Dr. Charles Shear told an American Physiological Society convention that abdominal fat influences the amount of insulin in the body, and high amounts of insulin could lead to problems of high blood pressure, diabetes and coronary heart disease.

“Abdominal fat is an important predictor of heart disease,” said Shear, an assistant professor of public health and preventive medicine at the LSU Medical Center. “Fat located on the trunk of the body is more important than fat on the peripheral parts of the body.”

Shear’s findings come from a long-running study done in Bogalusa.

“In the past, the majority of studies looked at weight as a predictor of heart disease,” Shear said. “More recent studies have shown that, not only is weight important, but also the patterning of fat in different parts of the body.”

Bogalusa was chosen for the research because it is somewhat isolated, there is not a lot of mobility among the residents, and researchers are able to make comparisons between black and white residents, Shear said.

He said 3,784 people aged five to 24 were tested for body fat every three years since 1973. The most recent tests were evaluated in 1981-1983.

Body fat was tested on the triceps for peripheral fat, and the area below the shoulder blade was tested for body trunk fat, Shear said, adding that the total body fat tests were made by measuring the thickness of skinfolds.

“We've been following these kids for 13 years now,” Shear said, adding that the screenings began in 1973.

Shear said other factors taken into account are family history, alcohol and drug intake, and measures of “Type A” or high-blood-pressure behavior that often occurs along with heart attacks in older people.

He said there is a correlation between blood pressure and the amount of chest and stomach fat that children have.

“The ones that had more trunk fat had higher levels of blood pressure,” Shear said.

He said the findings hold true for female children, but between the ages of 18 and 24 there is little or no association between blood pressure and trunk fat.

Shear said he believes that females tend to show little or no weight gain during this age period, and that probably is why there is little correlation between body trunk fat and blood pressure in females for that age group.

Another recent finding of the Bogalusa study is that proteins that transport cholesterol in the body may be better predictors of future heart disease than the cholesterol particles themselves.

The human body has both bad and good proteins and cholesterol, said Dr. David Freedman, an LSU Medical Center assistant professor.

“Everyone has these proteins, but it’s the levels of the proteins that differ from person to person,” said Freedman.

Cholesterol levels have been linked to risks of heart attacks. He said it has been found that one sort of cholesterol, called high-density lipoproteins — or HDLs — actually helps to protect against heart attacks.

“White males have a large decrease of HDL cholesterol during puberty, and this might make them more likely to develop heart disease later,” Freedman said.

Autopsies of 35 Bogalusa children who have died showed that fat deposits form early in life on arteries and that children with high cholesterol levels have more chances of developing atherosclerosis, clogging of the arteries.

“Cholesterol and blood-pressure levels are important in early life,” Freedman said.

In 1984, 13,147 people — or 294.6 residents per 100,000 — died in Louisiana of diseases of the heart, the leading cause of death in the state, said Audrey Collins, a spokeswoman for the state Department of Health and Human Resources.

Collins said, however, that the 1984 rate for the nation was 323.5 per 100,000 people.