High-Fiber, Low-Fat Diet Benefits Kids' Heart Health, Study

3/8/2006- Overweight children kept on a *"nutritious"* diet and encouraged to exercise during a two-week period showed a dramatic reduction in cholesterol and insulin levels, according to a study presented last week at the American Heart Association's annual conference.

The children, aged 9 to 15, were kept on high-fiber, low-fat and low-cholesterol diets, rich in fruit, vegetables and whole grains, with moderate amounts of lean protein. After two weeks, total cholesterol levels fell on average 21 percent, while LDL (bad) cholesterol dropped 25 percent, said researchers from the University of California. Insulin levels also decreased around 30 percent.

The scientists, led by Dr James Barnard, claimed their study demonstrates that simple changes in diet and exercise, even after a very short period, can have significant protective effects against heart disease.

The research was prompted after the publication in 2002 of autopsy studies on nearly 3,000 people aged 15 to 34 who had died of external causes. The results of the autopsies revealed that arteries began to be clogged by the growth of *"fatty streaks,"* or plaque build-up, as early as the teenage years. And the fatter the teenager, the more advanced the disease.

"Fat tissue produces chemicals that we now know are directly correlated with the development of heart disease. Obese children are going to end up with heart disease far earlier in life - in their 30s and 40s, maybe even earlier," said Dr Barnard.

The adolescents who participated in the study spent two weeks in a program at the Pritikin Longevity Center & Spa in Aventura, Florida. They exercised for around 2.5 hours a day and were allowed to eat as much as they liked of the foods provided.

The researchers' also tracked beneficial changes in what they termed 'novel' risk factors - chemicals that fat tissue churns out, called adipocyte-derived factors that are directly linked with plaque build-up in the coronary arteries. Blood tests taken after the two-week period also revealed improvements in fat-tissue-derived risk factors, such as leptin, which fell 57 percent, and TNFa, which dropped 43 percent, said the researchers. There was very little change in weight.

"We've known for a long time that obesity is related to the development of heart disease, but we really didn't know why. That's partly because for years scientists thought fat tissue was dormant, just a storage tank for excess calories. Now we know it's actually an endocrine organ, a very active factory that pumps out chemicals that stimulate the growth of plaque," said Dr Barnard.

He added that simple lifestyle changes can have beneficial results, and that children *"didn't need to lose a lot of weight before reaping remarkable rewards for their hearts."*