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[European Society of Cardiology](#)

Paper highlights blood pressure risk in overweight children

Sophia Antipolis, 15 October 2010: The European Society of Cardiology (ESC) welcomes the findings of a paper presented today at the American Heart Association's High Blood Pressure Research 2010 Scientific Sessions (HBPR 2010) held in Washington, DC, USA. The paper details research into the relationship between body mass index (BMI) and blood pressure in children. It concludes that an increase in BMI in already overweight children risks a far greater rise in blood pressure than would the same increase in BMI in normal-weight children.

Commenting on the paper, ESC spokesperson Professor José Ramón González-Juanatey from the Hospital Clinico Universitario Santiago in Spain, said, "This study is relevant because it emphasises the relationship between BMI and blood pressure in children. It is very important for everyone, especially the general population, to understand the significant cardiovascular risk caused by childhood obesity, and the simple fact that weight reduction and exercise can have a major and positive impact."

Co-author of the paper is Doctor Wanzhu Tu of the Regenstrief Institute in Indianapolis. The research team tracked blood pressure, height and weight measurements from over 1,000 children for a period up to 10 years, and compared BMI to national charts adjusted for age, sex and height. Children with BMIs above the 85 percent point are considered overweight. Below this level, BMI effects on blood pressure appear fairly linear, but for those above the 85 percent point – and especially above the 90 percent point – the BMI effects are noticeably stronger.

Analysis indicated that the effect on both systolic and diastolic blood pressure readings of overweight children was over four times that of normal-weight children for whom BMI and blood pressure remained related but with weaker associations. The paper argues that even a modest reduction in BMI can result in a significant lowering of blood pressure in overweight children while, conversely, just a small increase could put them at much greater risk of higher blood pressure.

Professor Joep Perk of the School of Health and Caring Sciences at Linneaus University in Sweden, and Board Member of the European Association of Cardiovascular Prevention and Rehabilitation (EACPR)¹, says that the research is very interesting. "The obesity epidemic in children presents a major threat to future public health strategy," he notes, adding, "Overweight children usually grow into overweight adults with all the risks this carries of cardiovascular disease. The results of the study reinforces that we must maintain our focus on relevant campaigns to promote weight loss and control in all sections of society, but particularly amongst the young."

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References

¹The mission of the European Association for Cardiovascular Prevention & Rehabilitation (EACPR) is to promote excellence in research, practice, education and policy in cardiovascular prevention and rehabilitation in Europe.

