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## Atherosclerosis and Inflammation

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### 1.5 Brisighella Heart Study: Hypertension, HDL Cholesterol and Triglycerides

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**Aim.** To verify the existence of a linear correlation between blood pressure (BP) levels and lipidic parameters (HDL cholesterol and triglycerides, TG) in a free-living population.

**Methods.** Brisighella Heart Study, promoted by Prof. Giancarlo Descovich in 1972, is an observational longitudinal study with a 4-year follow-up aimed at evaluating the spontaneous variations of major cardiovascular risk factors in a population living in Emilia - Romagna. We analyzed the data of 591 men and 605 women controlled in 2004.

**Results.** In male subjects, no significant variations in HDL levels were found when systolic (SBP) and/or diastolic pressure levels (DBP) rose. Relating to TG, lower levels emerged in subjects with lower DBP ( $p=0.03$ ). This didn't happen for SBP. In women, lower TG levels were observed in subjects with lower SBP ( $p=0.001$ ). A similar trend existed for DBP ( $p<0.001$ ). Finally, higher HDL levels were found in women with lower SBP ( $p=0.003$ ) and DBP ( $p=0.048$ ).

**Conclusions.** BP distribution in our population reflects that of general Italian population. In male subjects we can observe higher HDL levels in those people with lower DBP. As for women, significantly higher HDL levels and lower TG levels appear in subjects with lower SBP and DBP levels. These data seem to support the hypothesis that, at least in women, an influence of these lipidic parameters on BP levels exists, as it was previously demonstrated in literature for LDL and total cholesterolaemia.