The population-based MONICA/KORA registry of acute myocardial infarction (AMI) for the study population of Augsburg was established in 1984. The major task was the description of time trends of AMI morbidity, ischaemic heart disease (IHD) mortality per 100,000 population and their underlying determinants. Results of 18 years of registration are presented stratified by gender and discussed from a public health point of view. From 1985 through 2002 a total number of 17,884 cases of AMI and IHD deaths (12,798 male; 5,086 female cases; age 25 - 74 years) were registered and validated according to MONICA rules. In the course of time, IHD mortality per 100,000 population decreased from 280 to 168 in men and from 88 to 54 in women; AMI morbidity decreased from 542 to 404 in men, and from 171 to 122 AMI in women. The important decrease of IHD mortality was mainly explained by a decline of recurrent events and a reduction of 28-day case fatality (men from 52 % to 42 %, women from 52 % to 44 %) as result of an intensified invasive reperfusion therapy and evidence-based drug medication. The presented results show positive developments, but underscore the necessity for increased primary prevention.