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## Metabolic Aspects and Mechanisms

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### 9.10 Prognostic Relevance of Masked Hypertension in Subjects with Normal and High-Normal Clinic Blood Pressure

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**Introduction.** The prognostic impact of masked hypertension is not yet completely clear.

**Aim.** To evaluate the prognostic relevance of masked hypertension in subjects with normal and high-normal clinic blood pressure (BP) levels.

**Methods.** The occurrence of fatal and nonfatal cardiovascular events was evaluated in 591 subjects with normal and high-normal clinic BP (clinic BP in the range of 120-139 mmHg for systolic BP and 80-89 mmHg for diastolic BP). Among them, 471 were classified as having true normal and high-normal BP (clinic BP <140/90 mmHg and daytime BP <135/85 mmHg) and 120 as having masked hypertension (clinic BP <140/90 mmHg and daytime BP >135 mmHg or 85 mmHg).

**Results.** During the follow-up ( $6.6 \pm 4.3$  years, range 0.5-15.5 years), 29 cardiovascular events occurred. In subjects with true normal and high-normal BP and masked hypertension the event-rates per 100 patient-years were 0.57 and 1.51, respectively. Even t-free survival was significantly different between the groups ( $P < 0.005$ ). After adjustment for other covariates, including clinic BP (forced into the model), Cox regression analysis showed that cardiovascular risk was significantly higher in masked hypertension than in true normal and high-normal BP (masked vs true normal and high-normal BP, relative risk 2.65, 95% CI 1.18-5.98,  $P = 0.018$ ).

**Conclusions.** Among subjects with clinic normal and high-normal BP, those with masked hypertension are at higher cardiovascular risk than those with true normal and high-normal BP. Out-of-office BP should be known in individuals with clinic normal and high-normal BP, preferably by ambulatory BP monitoring or alternatively by home BP measurement, to obtain a better prognostic stratification.