



Skin autofluorescence is a strong predictor of cardiac mortality in diabetes.

- [Meerwaldt R](#),
- [Lutgers HL](#),
- [Links TP](#),
- [Graaff R](#),
- [Baynes JW](#),
- [Gans RO](#),
- [Smit AJ](#).

Department of Medicine, University Medical Center Groningen, Groningen, Netherlands.

OBJECTIVE: Advanced glycation end products (AGEs) are biomarkers of metabolic stress and are thought to contribute to the increase of coronary heart disease (CHD) in diabetes. Tissue autofluorescence is related to the accumulation of AGEs. The aim of the present study was to evaluate the relationship between skin autofluorescence and metabolic burden (hyperglycemia and hyperlipidemia) and its relationship with CHD and mortality. **RESEARCH DESIGN AND METHODS:** Skin autofluorescence was measured noninvasively with an autofluorescence reader in 48 type 1 and 69 type 2 diabetic patients and 43 control subjects. The presence of CHD was observed at baseline and mortality during a follow-up period of 5 years. **RESULTS:** Autofluorescence correlated with mean A1C, triglycerides, and LDL. Autofluorescence values further increased with age, microalbuminuria, dialysis treatment, and diabetes duration. Autofluorescence was strongly related to the presence of CHD (odds ratio 7.9) and predicted mortality (3.0). Multivariate analysis showed that autofluorescence was more strongly associated with CHD and mortality compared with A1C, triglycerides, and LDL. **CONCLUSIONS:** Skin autofluorescence is strongly related to cumulative metabolic burden. Skin autofluorescence seems strongly associated with cardiac mortality and may provide important clinical information for risk assessment.

PMID: 17192342 [PubMed - indexed for MEDLINE]