Lonneke Smeding was born on August 19, 1984, in Utrecht, the Netherlands. In 2005, she obtained her bachelor degree in Biomedical Sciences at the University of Utrecht and in 2007, she finished her Masters training at the VU University in Amsterdam with a specialization in cardiovascular diseases. In November 2007, she started as a PhD student at the VU University Amsterdam under the supervision of Professor Dr. A.B.J. Groeneveld, Dr. F.B. Ploetz and Dr. M.C.J. Kneyber. The results of her research are presented in this thesis.