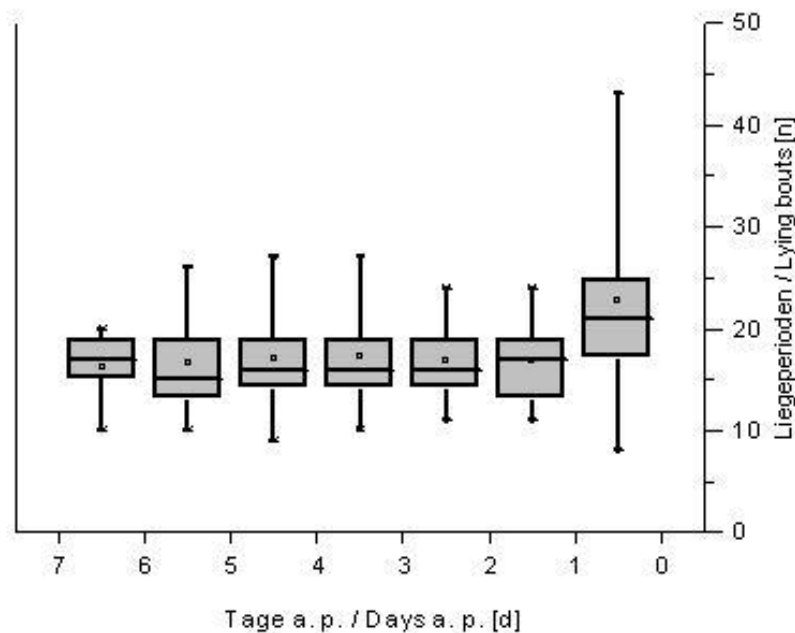


## Evaluation of Heart Rate and Lying Behaviour to Predict Calving of Dairy Cows

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A regular calving process does not require any human assistance. A premature or unnecessary assistance at parturition could have an adverse effect. Despite that it is useful to supervise calving without disturbance of the process in order to recognize problems or abnormal position at an early stage. Thus automatic monitoring of calving can be a useful way to reduce mortality of calves. Together with an increasing herd size, automatic management tools may reduce labour intensive observations. With an experimental approach lying behaviour and heart rate of dairy cows was measured in order to predict calving. 28 individual dairy cows kept in 15 equally designed calving pens were used to record lying behaviour and heart rate 7-10 days prior to parturition. The time 24 hours before calving was characterized by significant changes in lying behaviour (fig. 1). Heart rate increased as well close to calving, particularly 60-90 min before calving. Results indicate, that lying behaviour and heart rate can be used as short term indicators to predict calving by means of electronic devices.



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