

# Pre-menopausal women with palpitations have more symptoms, anxiety, depression, and lower HRQOL than post-menopausal women

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## Conclusion

Instant analysis of the ECG with direct response to the user during palpitations reduce symptoms, anxiety, depression, and increase HRQOL but more in pre- than post-menopausal women.

## Background

Palpitations is common, particularly in women, usually benign and caused by premature atrial/ventricular beats or stress-induced sinus tachycardia. Palpitations may cause disturbing symptoms, anxiety, depression, and decreased health related quality of life (HRQOL).

## Purposes

To evaluate if instant analysis of underlying heart rhythm with direct response to the patient during palpitations reduces symptoms, anxiety, depression, and increases HRQOL and to evaluate differences between pre- and post-menopausal women in this respect.

## Methods

- 913 women (338 ≤ 52 and 575 > 52 years old (mean age 44 ± 7 vs. 63 ± 7)) with palpitations were recruited from social web sites
- Coala Heart Monitor was used by the participants for recording and analysis of ECG
- ECG was recorded twice a day and at symptoms for 60 days
- The system uses a well-validated algorithm to analyze heart rhythm, is connected to the user's smartphone and provides immediate response to the user.
- Questionnaires addressing symptoms (Symptom severity and frequency checklist (SCL), anxiety, depression Hospital anxiety and depression scale (HADS), Generalized Anxiety Disorder (GAD-7) and HRQOL (RAND-36)) were analyzed before and after two months
- Exclusion criterion was known atrial fibrillation.

## Results

Pre-menopausal (≤ 52 y) women scored higher than post-menopausal (> 52 y) women

- in both scales of the SCL,  $p < 0.001$
- in total anxiety and depression score measured by HADS and GAD-7,  $< 0.001$
- scored lower in five components in RAND-36
- after 60 days with the heart monitor symptoms improved, however, younger women were still more symptomatic, improved less in HRQOL, were more depressed, and had more anxiety compared to older women

