Associations between Borg's rating of perceived exertion and physiological measures of exercise intensity.

Borg's rating of perceived exertion (RPE) is a widely used psycho-physical tool to assess subjective perception of effort during exercise. We evaluated the association between Borg's RPE and physiological exercise parameters in a very large population. In this cohort study, 2,560 Caucasian men and women [median age 28 (IQR 17-44) years] completed incremental exercise tests on treadmills or cycle ergometers. Heart rate, blood lactate concentration, and RPE (Borg scale 6-20) were simultaneously measured at the end of each work load. Rating of perceived exertion was strongly correlated with heart rate ($r = 0.74$, $p < 0.05$). Borg's RPE seems to be an affordable, practical and valid tool for monitoring and prescribing exercise intensity, independent of gender, age, exercise modality, physical activity level and CAD status. Exercising at an RPE of 11-13 (“low”) is recommended for less trained individuals, and an RPE of 13-15 may be recommended when more intense but still aerobic training is desired.