

## Relative importance of inflammation and cardiorespiratory fitness for all-cause mortality risk in persons with rheumatoid arthritis – the population-based Trøndelag Health Study

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### **Supplemental material 2: Formulae for estimation of cardiorespiratory fitness**

Two formulae were used for estimation of cardiorespiratory fitness (eCRF) in the present study, depending on whether the individual had rheumatoid arthritis (RA) or was a control participant, respectively. These formulae were previously published and a validation of their comparability and suitability for persons with RA has been performed.<sup>1,2</sup> The formulae include the PA index, which was calculated based on intensity, duration, and frequency of self-reported physical activity as published in.<sup>2</sup>

#### **Calculation of eCRF for persons with RA**

Coding: sex: female=0, male=1; smoking: never smoked=0, ever smoked=1.

$$\text{eCRF} = 82.487 + (\text{sex} \times 28.053) - (\text{age} \times 0.361) - (\text{age} \times \text{sex interaction} \times 0.296) - (\text{BMI} \times 0.648) - (\text{RHR} \times 0.095) - (\text{smoking} \times 2.299) + (\text{PA index} \times 0.223) - (\text{SBP} \times 0.079)$$

#### **Calculation of eCRF for control participants**

*Men:*  $100.27 - (\text{age} \times 0.296) - (\text{WC} \times 0.369) - (\text{RHR} \times 0.155) + (\text{PA index} \times 0.226)$

*Women:*  $74.74 - (\text{age} \times 0.247) - (\text{WC} \times 0.259) - (\text{RHR} \times 0.114) + (\text{PA index} \times 0.198)$

#### **Abbreviations:**

BMI, body mass index (kg x m<sup>-2</sup>); eCRF, estimated cardiorespiratory fitness (mL x min<sup>-1</sup> x kg<sup>-1</sup>); PA, physical activity; SBP, systolic blood pressure (mmHg); RHR, resting heart rate (bpm); WC, waist circumference (cm).

#### **REFERENCES**

- 1 Liff MH, Hoff M, Fremo T, et al. An estimation model for cardiorespiratory fitness in adults with rheumatoid arthritis. *Med Sci Sports Exerc* 2020;52:1248-55.
- 2 Nes BM, Janszky I, Vatten LJ, et al. Estimating VO<sub>2</sub>peak from a nonexercise prediction model: the HUNT Study, Norway. *Med Sci Sports Exerc* 2011;43:2024-30.