The purpose of this study was to compare local sweating rate (LSR) and local sweat sodium ([Na⁺]), chloride ([Cl⁻]), and potassium ([K⁺]) concentrations of tattooed skin and contralateral non-tattooed skin during exercise.

**Participants**

33 recreational exercisers with ≥ 1 unilateral permanent tattoo on the torso/arms

17 male 16 female

**Types of Exercise**

- Running
- Cycling
- Fitness

**Results**

Based on the analysis of variance results, there were no differences between tattooed and non-tattooed skin for LSR, sweat [Na⁺], sweat [Cl⁻], or sweat [K⁺].

Multiple regression analyses suggested that younger tattoos were associated with higher sweat [Na⁺] (p = 0.045) and colorful tattoos were associated with higher sweat [Cl⁻] (p = 0.04) compared with contralateral non-tattooed skin. There were no effects of LSR or tattoo characteristics on regression models for LSR or sweat [K⁺].

**Conclusion**

The overall results of this study suggest there are no effects of tattoos on LSR and sweat [K⁺] and marginal effects on sweat [Na⁺] and [Cl⁻] during exercise.