

To provide whole blood on the battlefield can be a challenge, but a buddy system protocol is both an elegant and the only currently available means to supply blood to a Special Forces team in far-forward locations” Eliassen et al (2016).

Abstract:

BACKGROUND: To provide whole blood on the battlefield can be a challenge, but a buddy system protocol is both an elegant and the only currently available means to supply blood to a Special Forces team in far-forward locations. Our aim was to investigate donor-safety associated with such a protocol.

METHODS: This study was a randomized, double-blinded, controlled trial that aimed to evaluate the immediate effects of a 450 cc blood donation on physical performance in fatigued and dehydrated Special Forces soldiers. The primary outcome variables were absolute and relative maximal oxygen uptake (VO₂max), exercise tolerance time (ETT) and heart rate (HR).

RESULTS: Relative VO₂max decreased by 7.1% in the donation group between pre and posttest, compared to no change in the control group. Absolute VO₂max decreased by 11.2 and 3.6% between pre and posttest in the donation and control groups, respectively. Mean ETT in the donation group was on average 92 seconds shorter compared to baseline, which represents a decrease of 9.5%.

CONCLUSION: Donating blood after a week of strenuous physical activity is feasible for Special Forces personnel. While the donation results in some diminishment of VO₂max, a 3.6%-11.2% decrease in relative VO₂max, and in elevation of submaximal HR levels highly trained personnel continue to perform well both at both sub-maximal and maximal effort levels.

Full Text

Reference:

Eliassen, H.S., Aandstad, A., Bjerkvig, C., Fosse, T., Hervig, T.A., Pidcoke, H.F. and



Strandenes, G. (2016) Making whole blood available in austere medical environments: donor performance and safety. *Transfusion*. 56(Supplement S2), S166-S172.

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