

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).

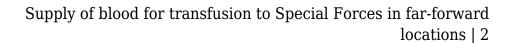
RESULTS: Relative VO2max decreased by 7.1% in the donation group between pre and posttest, compared to no change in the control group. Absolute VO2max decreased by 11.2 and 3.6% between pre and posttest in the donation and control groups, respectively. Mean ETT in the donation group was on average 92 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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