



RDCR – DONOR PERFORMANCE MODULE



WE NEED TO ANSWER THE FOLLOWING

- If on scene blood donation reduces the Donors physical performance to a degree that puts both the donor and the entire team at risk?
- Can we establish a Far Forward Donor Pool and execute transfusion of Warm Fresh Whole Blood to a «bleeding buddy» (Buddy transfusion) within safe margins??

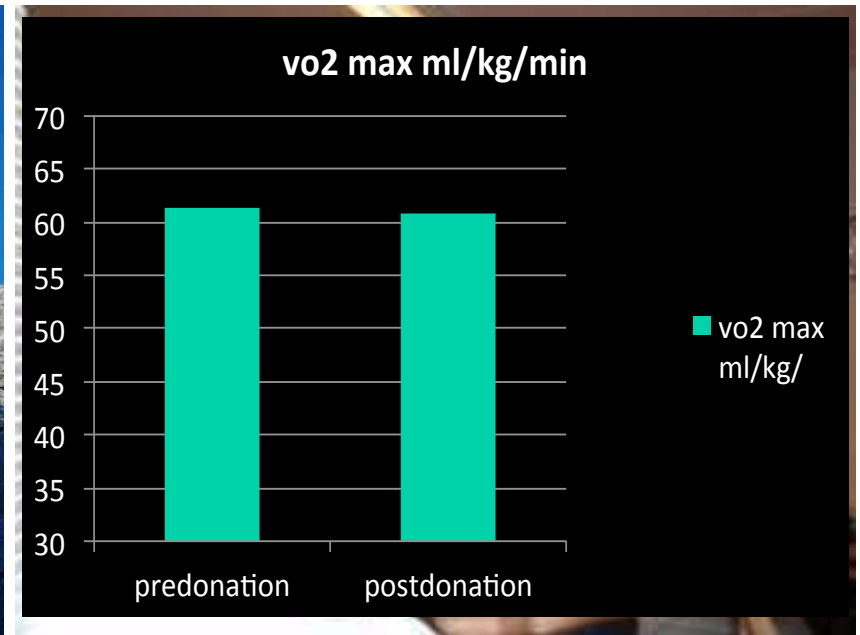
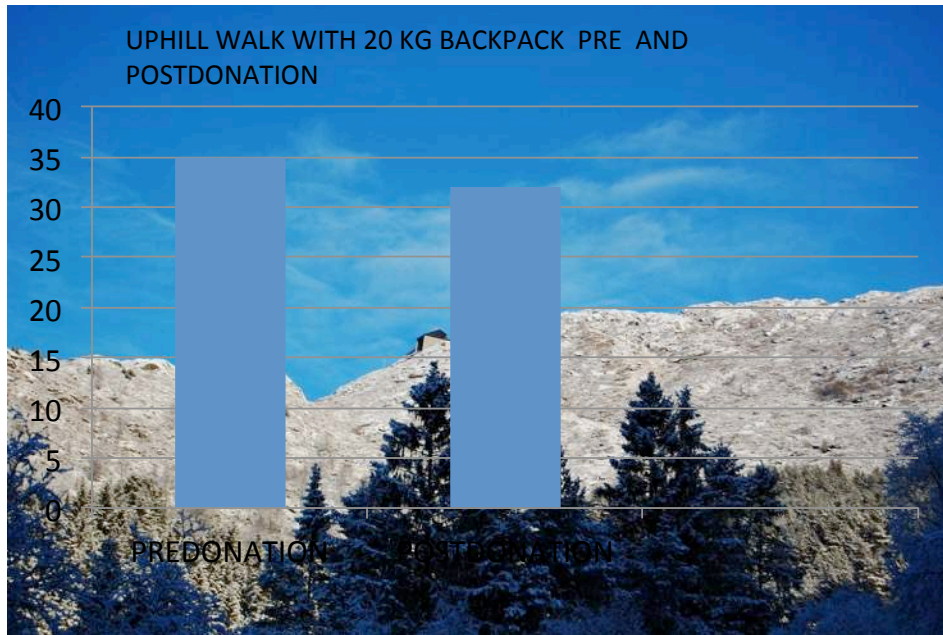


Donor Performance

Physical performance

Mountain hiking
with 20 kg / 45
pound rucksack

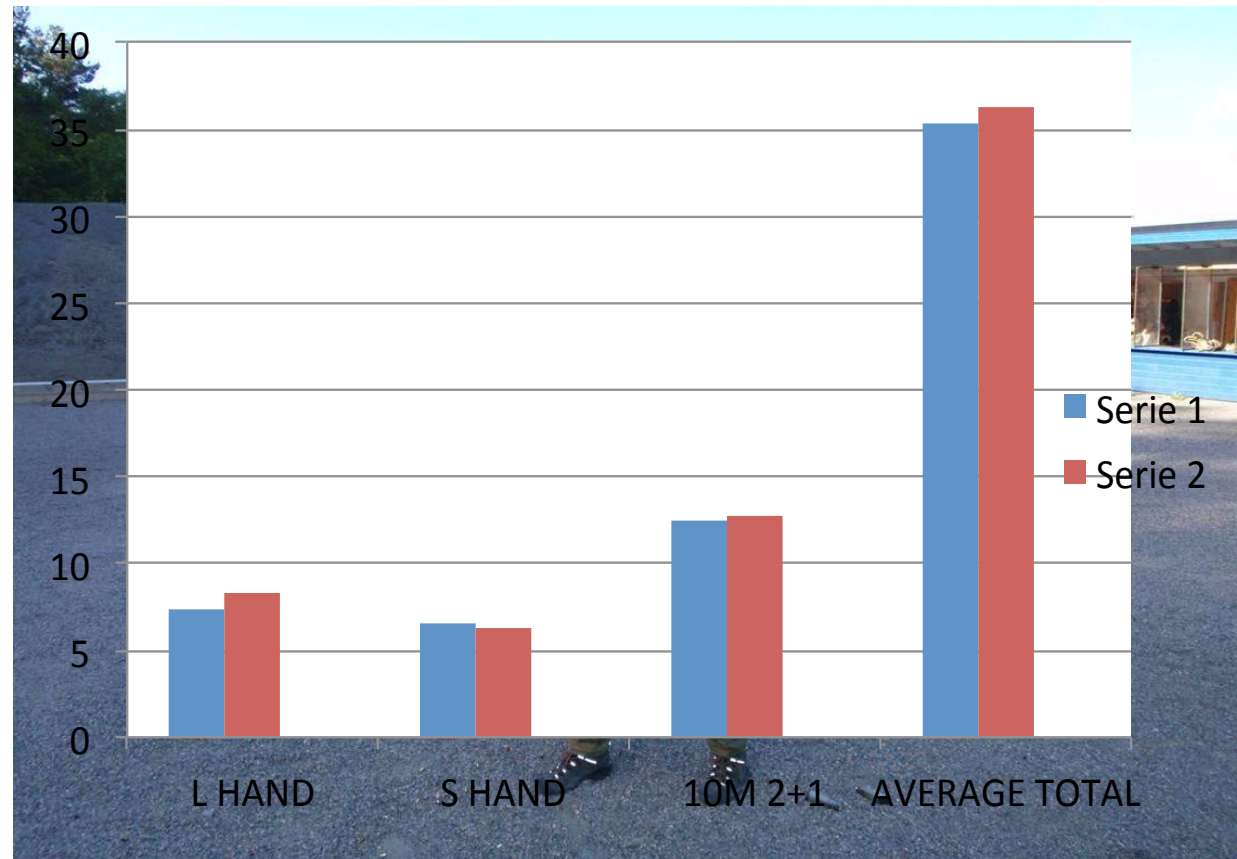
VO2 MAX
testing on
treadmill



Donor Performance

Cognitive performance

50 rounds
course of fire -
marksmanship
test



Extended Donor Performance

Strenuous escape and evasion exercise;

- 6 days,
- Physical fatigue,
- Dehydration,
- In the catabolic state



Variable	Group	Pretest	Retest	Difference value (%)	P-value
ETT (seconds)	D	968 (33)	876 (60)	-92 (-9.5)	0.006
	ND	970 (39)	937 (71)	-33 (-3.4)	0.124
VO ₂ max (mL·kg ⁻¹ ·min ⁻¹)	D	56.0 (3.0)	52.0 (3.4)	-4.0 (-7.1)	0.001
	ND	57.8 (3.6)	57.8 (5.3)	0	1.00
VO ₂ max (L·min ⁻¹)	D	4.91 (0.30)	4.36 (0.35)	-0.55 (-11.2)	<0.001
	ND	5.03 (0.65)	4.85 (0.54)	-0.18 (-3.6)	0.128
Body weight (Kg)	D	87.7 (3.8)	83.9 (3.6)	-3.8 (-4.3)	0.001
	ND	87.5 (15.3)	84.6 (14.3)	-2.9 (-3.3)	<0.001
HF _{peak} (beats·min ⁻¹)	D	196 (2)	192 (6)	-4 (-2.0)	0.181
	ND	192 (9)	184 (11)	-8 (-4.2)	0.085



THOR

**TRAUMA HEMOSTASIS & OXYGENATION
RESEARCH NETWORK**

Two Units – Single Donor – Is it feasible?

Soma 2014



Would you draw two units of blood from the same donor in an austere environment?

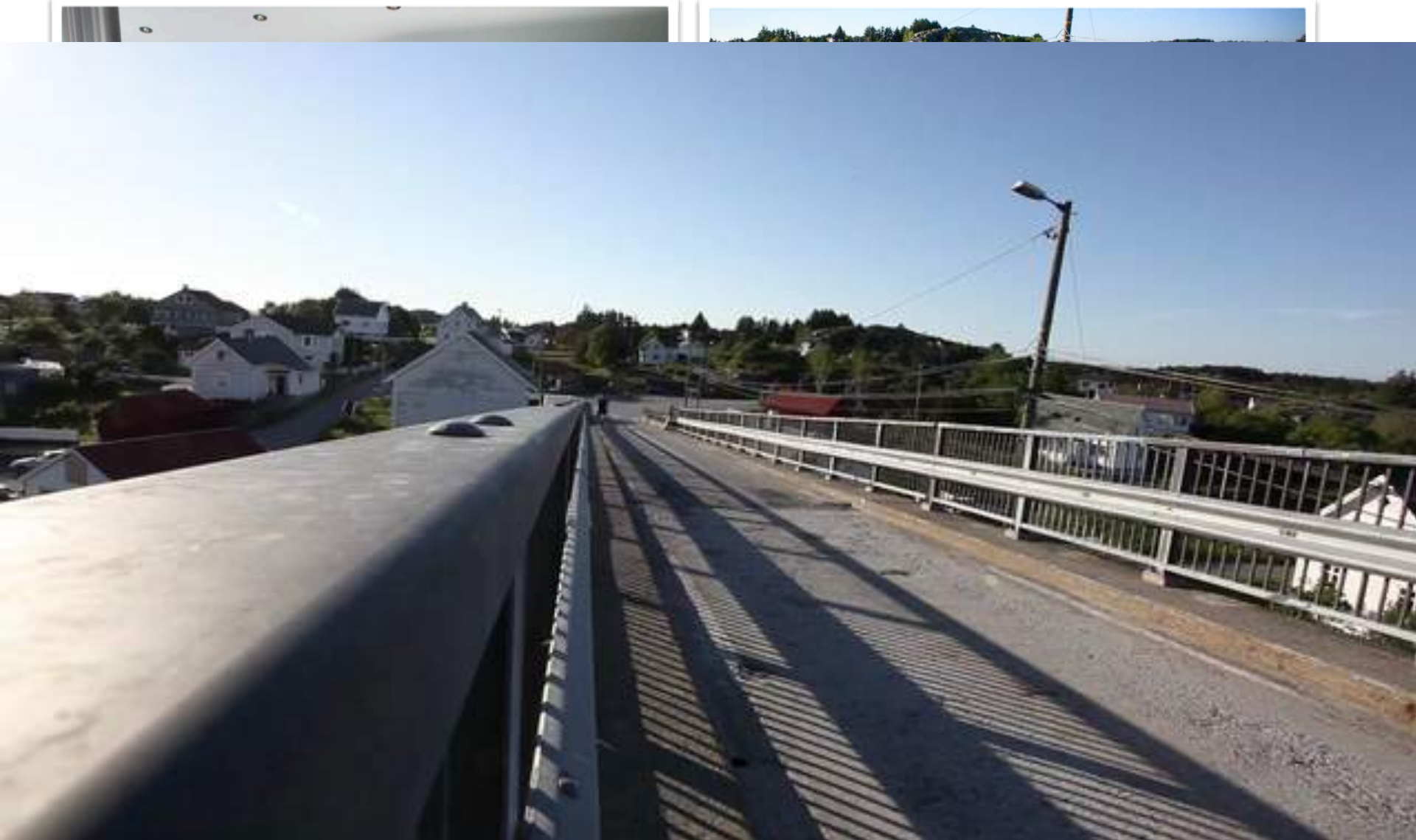


Method

1. 2 units drawn from one donor
2. Donor performed a 600 meter high intensity run 3 minutes post donating two units of blood
3. Post run the following diagnostics were documented:
 - Pulse
 - StO₂
 - Lactate

No ORS was given







	Baseline	1 unit	2 units	Pre-run	Post-run	30 min post-run
Pulse	71 bpm	72 bpm	90 bpm	110 bpm	171 bpm	
Lactate	1,7				11,7	1,2
StO2	74	74	76		55	

No discomfort pre, during Or post donation.

