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PHYSICAL ASSESSMENT USING A NOVEL APPROACH WITH A SELF-PROPELLED  
TREADMILL FOR XP-ANTACTIK EXPLORERS

**Abstract**

Antarctica is a challenge for the human body whenever someone ventures there and requires an important physical preparation. A group of 6 explorers (3 women and 3 men; 25-44 years old) participated in a 30 day complete autonomy expedition in Antarctica. The objective was to observe the physiological adaptations of the explorers in this extreme environment following physical assessment using a novel approach with a non-motorised adapted to the task self-propelled treadmill (HiTrainer, Bromont, Qc). A specific maximal aerobic test performed on both motorised and non-motorised treadmill, a grip strength test and an aerobic sub-maximal exercise (57-0.01