



Purpose: The purpose of this study was to examine coagulation and platelet function in response to heat stress—induced passively and in conjunction with exercise. **Methods:** Eight healthy, college-aged males participated in two heat stress conditions: exercise-induced heat stress (EIHS) and passive heat stress (PHS). The EIHS condition consisted of 45 minutes of cycle ergometer exercise at a resistance of 2.0 - 2.5 kp while wearing encapsulating clothing. The PHS condition required subjects to sit in a tub at -39.5°C ($\pm 0.5^{\circ}\text{C}$) for 45 minutes, or until a core temperature had risen 1.5°C from rest. Subject core temperature (T_{co}), thermal sensation (TS), and heart rate (HR) were measured at five minute intervals during both conditions. Pre, immediate-post, and 1-hour post condition blood draws were collected for each condition. The blood samples were analyzed for platelet function, fibrinogen, prothrombin (PT), activated partial thromboplastin time (aPTT) and complete blood count (CBC). A 2x3 (condition x time) repeated measures analysis of variance was run to determine significant effects for blood samples, whereas a 2x8 factor RMANOVA was used to determine significant differences for T_{co} , TS and HR. Significance was set at $p < 0.05$. **Results:** T_{co} increased significantly over time in both conditions, but there was no main condition effect. HR and TS increased significantly over time in both conditions, but subjects had significantly higher HR and