

PHYSIOLOGICAL & PSYCHOLOGICAL STUDIES
DURING
SIXTH ANTARCTIC EXPEDITION (1986-87)

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Physiological and psychological studies were carried out on both the summer and wintering members. Sixteen members of the Fourth Wintering team and 6 members of summer team (chosen at random from different disciplines) were subjected to the following physiological tests, for studying changes in human physiology under changing environmental conditions :

- (i) Pulmonary functions
- (ii) Heart rate and blood pressure
- (iii) Skin temperature from six different parts of the body & oral temperature.
- (iv) Skin fold thickness & body weight
- (v) Cold process response
- (vi) Electro-graph (ECG)

Psychological studies, for understanding the changes in human behaviour under extreme cold condition and isolation, were undertaken. Three successive readings spaced over a period of one month each were recorded on 32 subjects (Chosen

at random) of the summer team, 16 subjects of the Fourth winter team and 14 subjects of the Third winter team. The parameters studied :

- a. Security-Insecurity test
- e. Attentiveness test
- f. Memory test
- g. Personal experiences

Blood samples of the members of the Fourth wintering team were collected to study hormonal and ceradian rhythm changes.