Physical activity and exposure to nature: reciprocal benefits for greater gain in health protection
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**PHYSICAL ACTIVITY**
“Any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level”
(U.S. Department of Health and Human Service, 2008)

**GREEN EXERCISE**
“Physical activity in green spaces”
(Thompson Coon et al., 2010)

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**Mental Health**
Self-esteem, Vigor, Tranquility, Energetic arousal, Positive engagement

Anxiety, Depression, Reactivity to Stressors

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**Heart & lungs**

**Muscles**

**Bones & joints**

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**RISK**
CVDs  Diabetes  Cancer
Sleep disorders

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**Allostatic load - stress response (Li et al. 2011)**

**Vitamin D and Melatonin**  (Holick, 2008)

**Biological rhythms** e.g. sleep and melatonin  (Escames, 2012)

**Rates of physical activity (?)**  (Lee & Maheswaran, 2011)

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**PROTECTIVE MECHANISMS**

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Mirick & S. Davis, 2008
Esposito & Cuzzocrea, 2010
Yamaguchi, Deguchi & Miyazaki, 2006