



Exercise for wellbeing: the role of thermal and outdoor natural settings to translate evidence into practice

- Giampaolo Merati -



“Exercise is medicine[®]”

SUB-DOSAGE

- . No positive effects
- . Potential acute risks



OVER-DOSAGE

- . Stress
- . Overload syndromes

INDICATIONS and CONTRAINDICATIONS

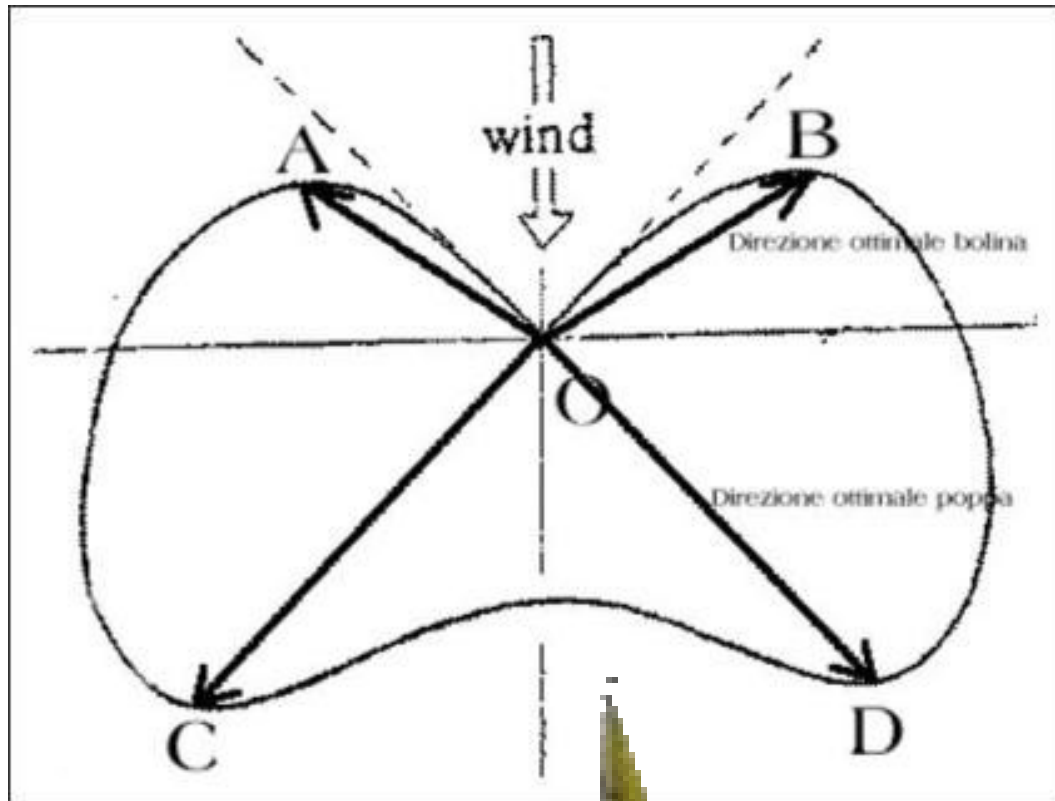
WHY?

HOW MUCH?

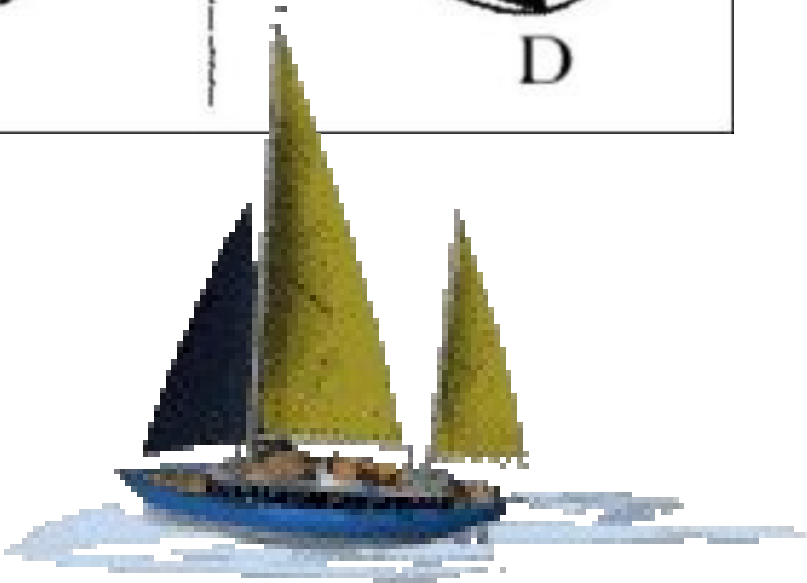
**IT DEPENDS ON THE AGE OF LIFE
AND ON PATHOLOGIES**

WHERE?

THE THERAPEUTIC WINDOW and CHRONIC PATHOLOGIES and FRAILTY



TEST THE
CONDITIONS
OF
APPLICABILITY
OF THE "DRUG
EXERCISE"

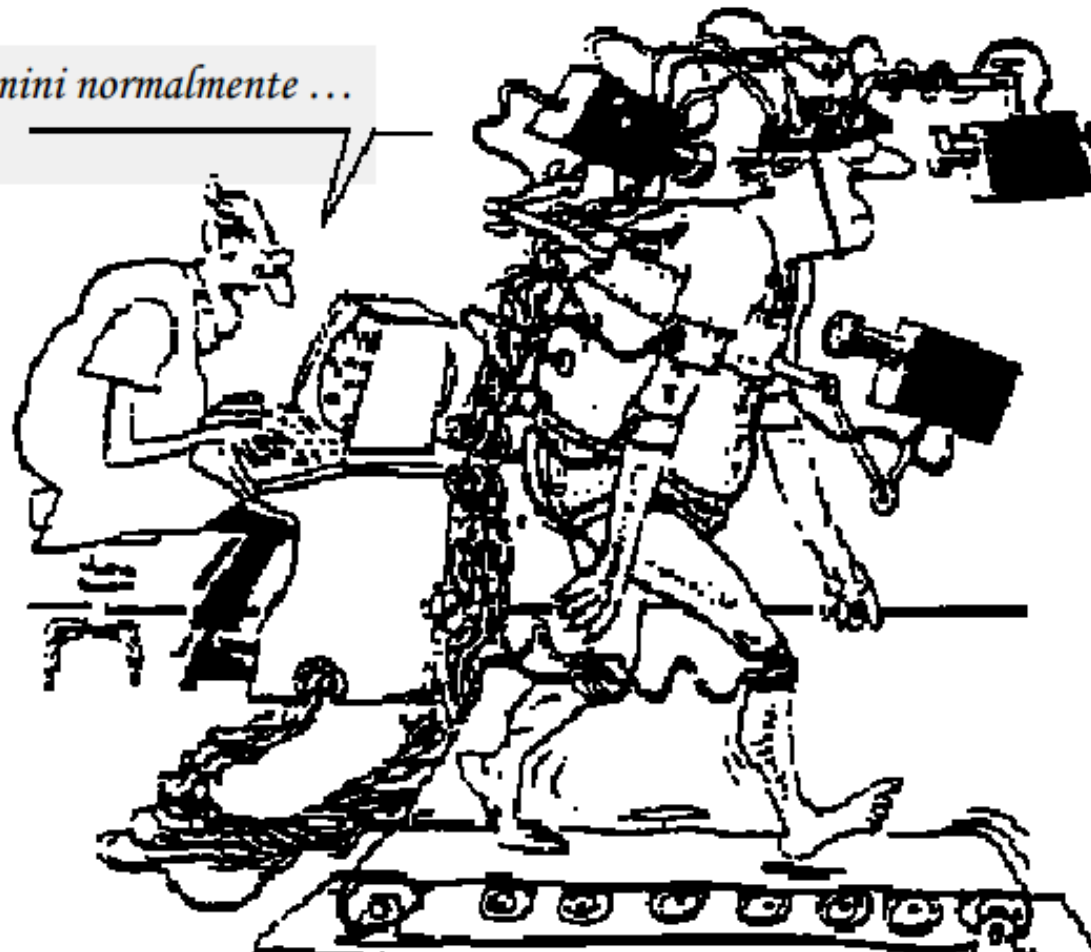


PRELIMINARY TESTING

Lab. testing: CPET

«On field» testing: 6MWT,
TUG, etc.

... e ora cammini normalmente ...



«Home» testing



Accelerometer+GPS: weight= 9 g



ECG+accelerometer: weight=15 g

	<i>Supervision</i>	<i>Further investigations for intense exercise?</i>
LOW RISK	None	No
MODERATE RISK	Professional	Yes
HIGH RISK	Clinic	Yes

BARRIERS TO THE CONDUCT OF TRAINING

50% OVERALL
At 6 MONTHS

Lack of time	(40,6%)
Lack of interest	(29,7%)
Age	(24,7%)
Tiredness or laziness	(13,5%)
Health reasons	(13,2%)
Economic reasons	(5%)
Lack of sports facilities	(4%)

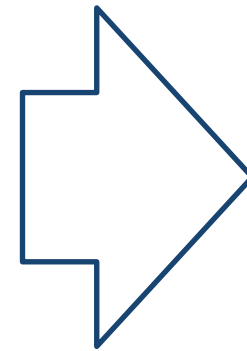
Adequate adherence to
exercise is key for the
effectiveness of any
intervention

NOT
PRESCRIPTION,
BUT
NEGOZIATION
with the PATIENT

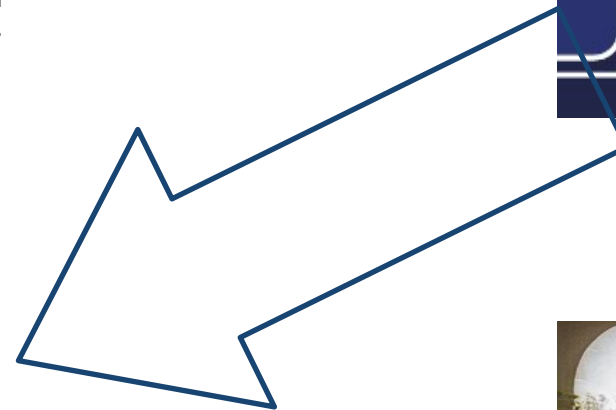
Exercising in natural environments is associated with greater positive engagement compared with exercising indoors *[Thompson et al., 2011]* and also with greater exercise adherence

Thompson Coon J, Boddy K, Stein K, Whear R, Barton J, Depledge MH. Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental wellbeing than physical activity indoors? a systematic review. *Environ Sci Technol.* 2011;45:1761-72.

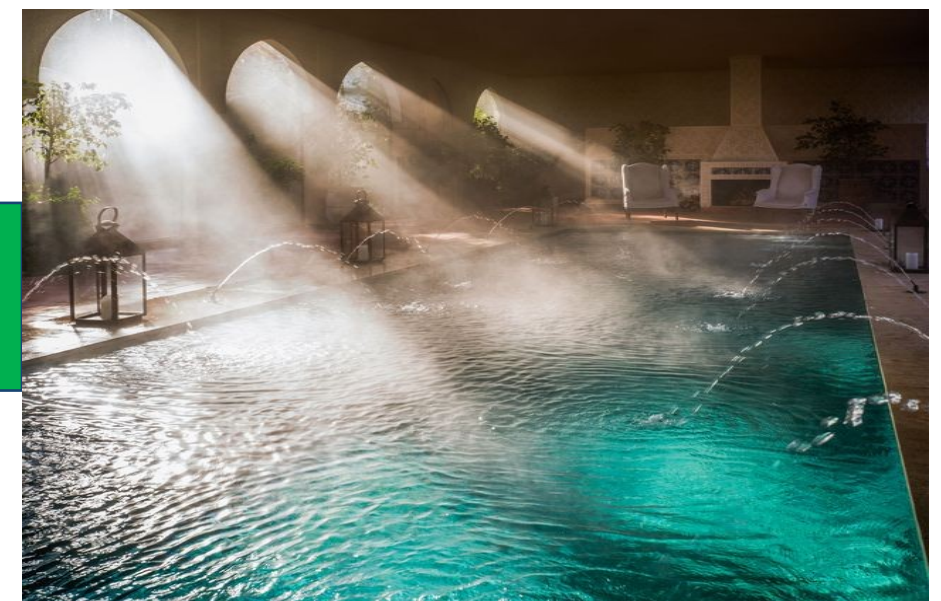
Friedenreich CM, MacLaughlin S, Neilson HK, Stanczyk FZ, Yasui Y, Duha A, Lynch BM, Kallal C, Courneya KS. Study design and methods for the breast cancer and exercise trial in Alberta (BETA). *BMC Cancer.* 2014;14:919.



PROMOTE **PROXIMITY**
BETWEEN ENVIRONMENT
AND PATIENT!



**OUTDOOR
activity?
SPA activity?**



FOREST BATHING



NORDIC WALKING



ORIENTEERING



...And SPA ENVIRONMENTS

YOGA



TAI CHI



[Boniello, Merati et al, 2014]

GYM

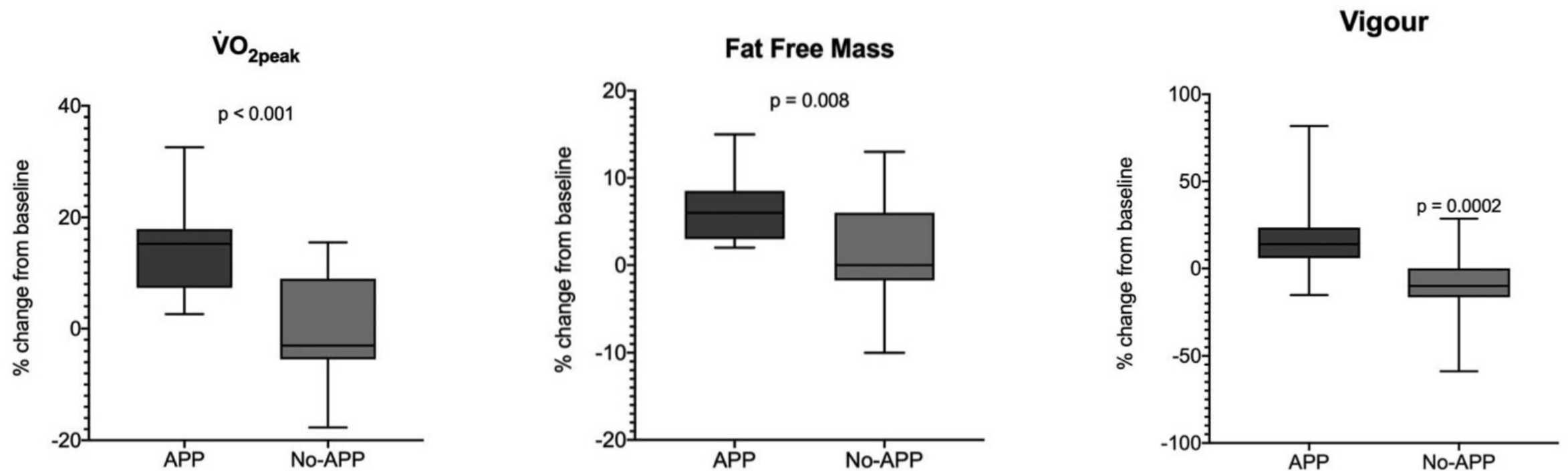


POOL



[Merati et al, 2014]

A Mobile Application for Exercise Intervention in People Living with HIV



[Bonato, Merati et al. MSSE, 2020]

Exercise must be implemented in the routine of everyday life, becoming a new lifestyle.

SPA and outdoor environments may be the "**new attractors**" for the proposal of structured exercise plans to the general population, to be then continued at home.



**A good 70% of what
we consider
«normal» aging
is actually the result
of physical inactivity.**



[McKelvey, Evans. American Council of Exercise, 2012]

THANK YOU!