

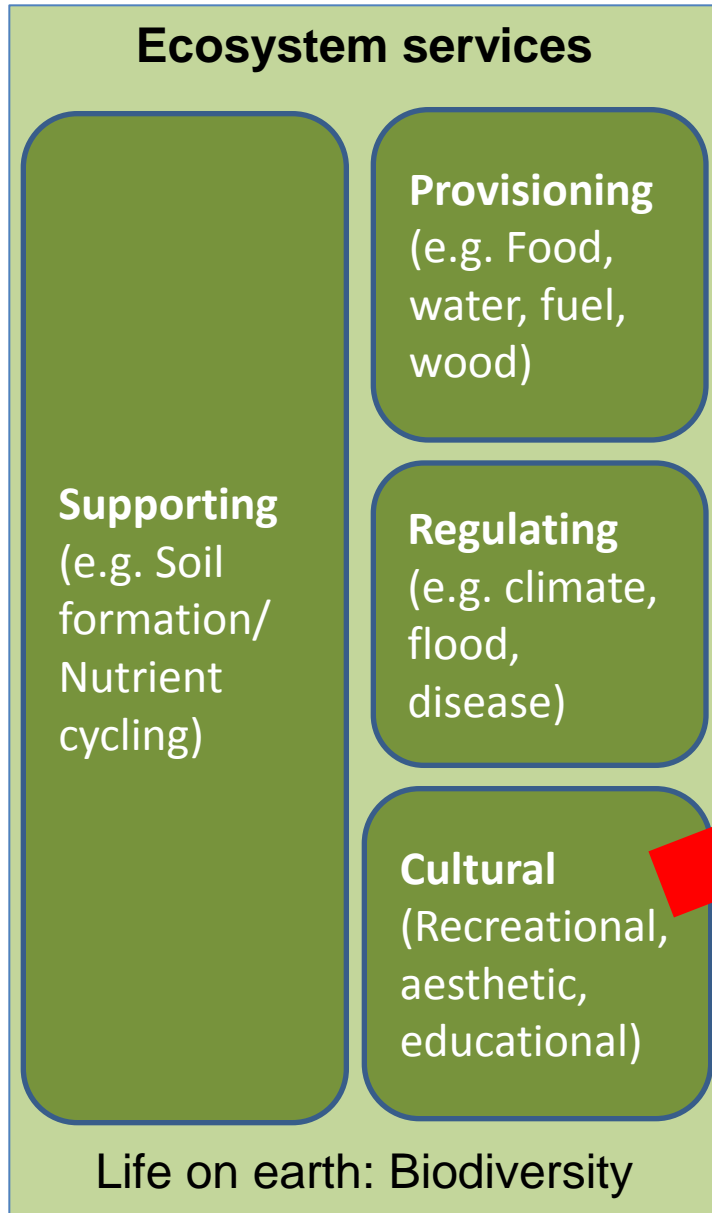


## Health and Wellbeing Benefits from the Coast

Mat White, Michael Depledge & Lora Fleming

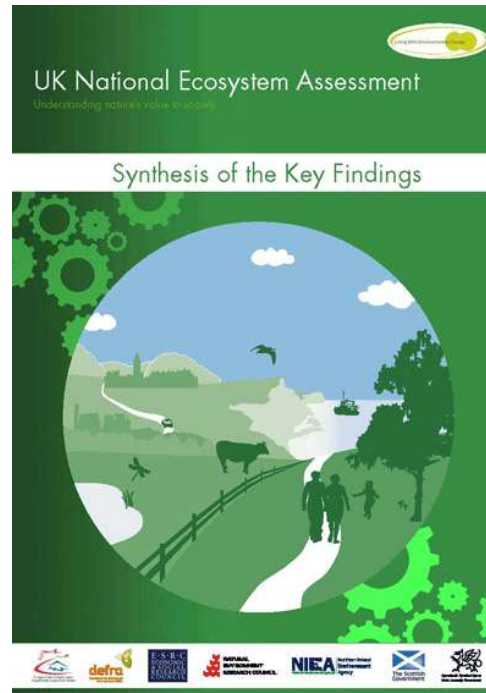
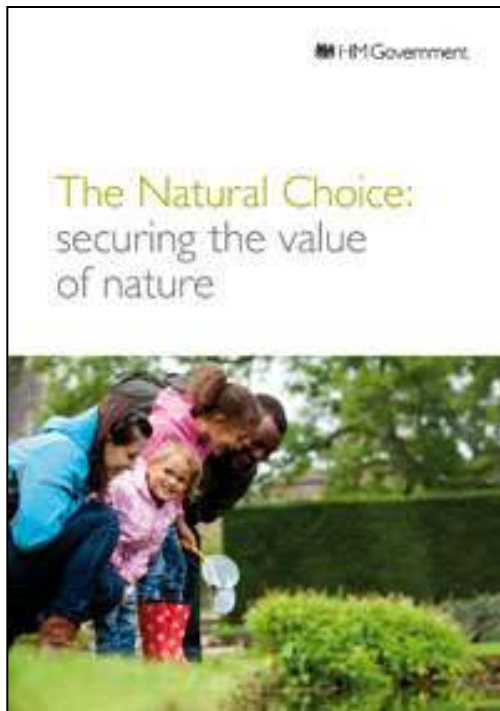
**European Centre for Environment & Human Health**







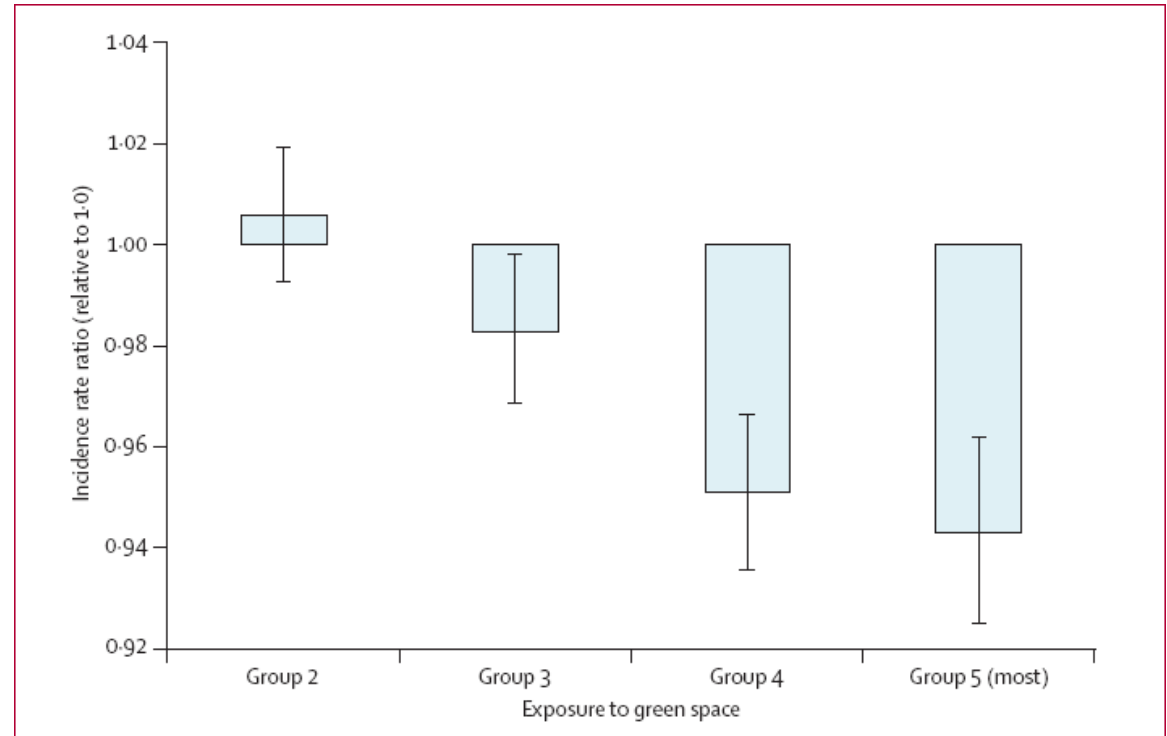
Good quality environments  
are good for human health





Living near green space is associated with:

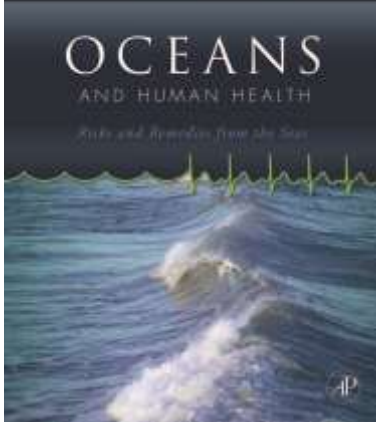
- lower stress
- decreased risk of mortality by age 65



**Figure 1: Incidence rate ratios for all-cause mortality in groups of exposure to green space, relative to group 1 (least exposure to green space)**  
Error bars indicate 95% CIs.



So far the focus has been on threats to health



**HABs & Other Toxins**



**Fisheries Destruction/  
overfishing**



**Storms, Floods &  
Climate Change**



**Microbial pollution**



**Anthropogenic Chemicals**



Dr Richard Russell  
(1687– 1759)



Royal Sea Bathing Hospital -  
Margate (Est.1791)

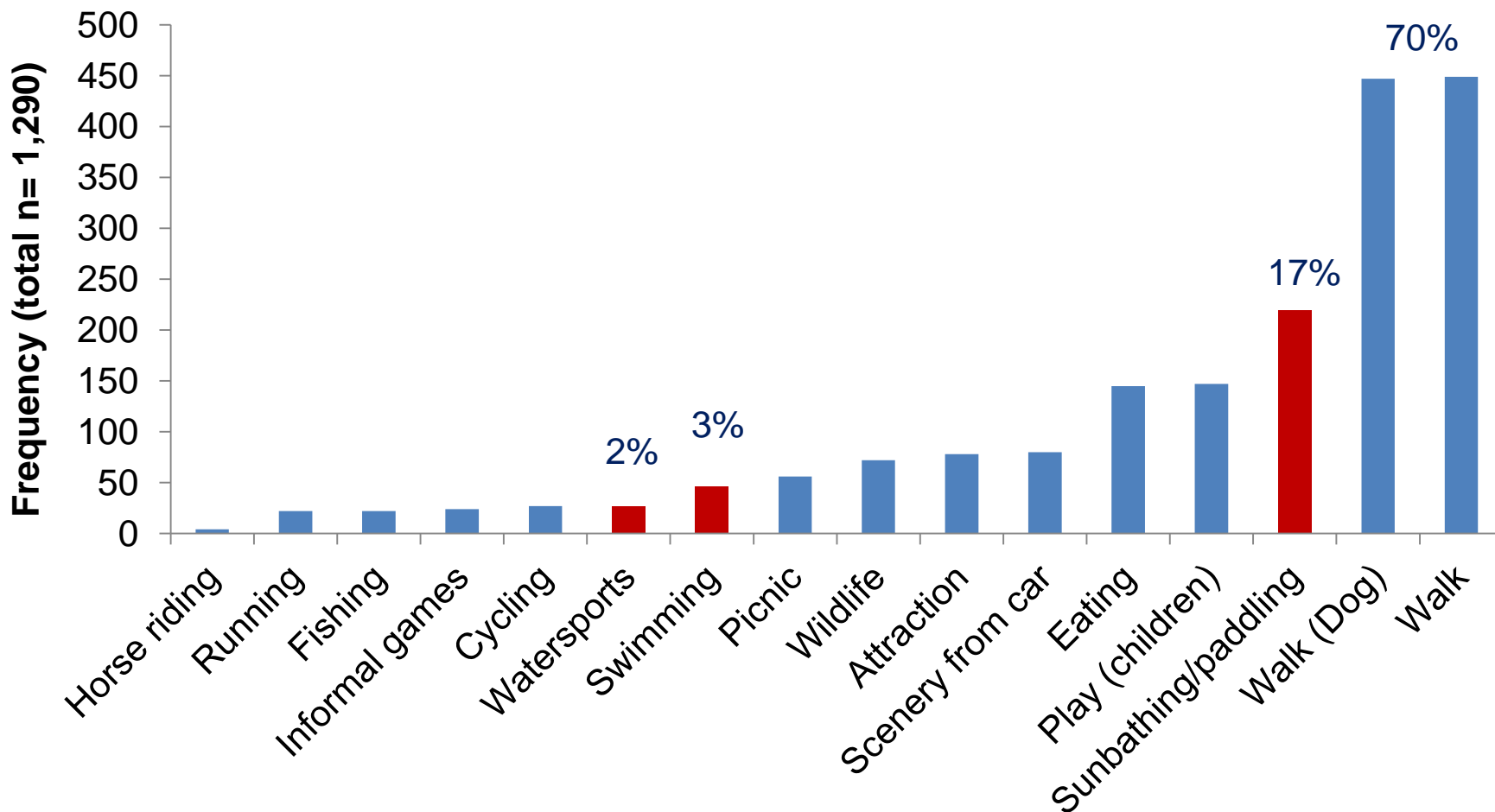


Even today: 260 Million trips to the English coast a year



## Monitor of Engagement with the Natural Environment (MENE, n = 142,031; visits n = 11,680)

NATURAL  
ENGLAND





Exposure  
to coast



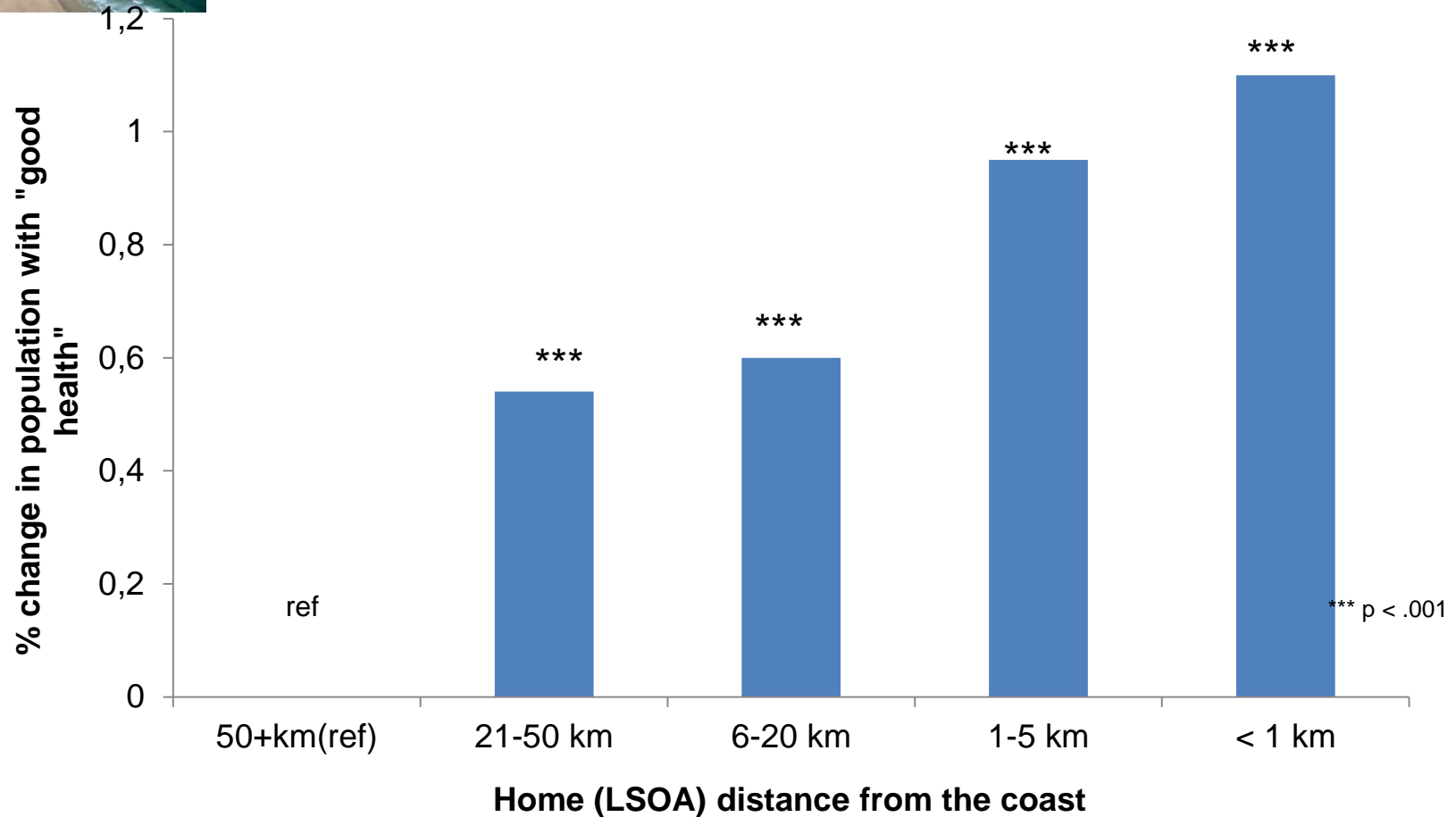
+ Physical  
Health







## Self-reported health Census Data (England, n = 48 million)



**PEOPLE WHO LIVE NEAR THE COAST ARE HEALTHIER**



Exposure  
to coast

+ Physical  
Health

> Exercise

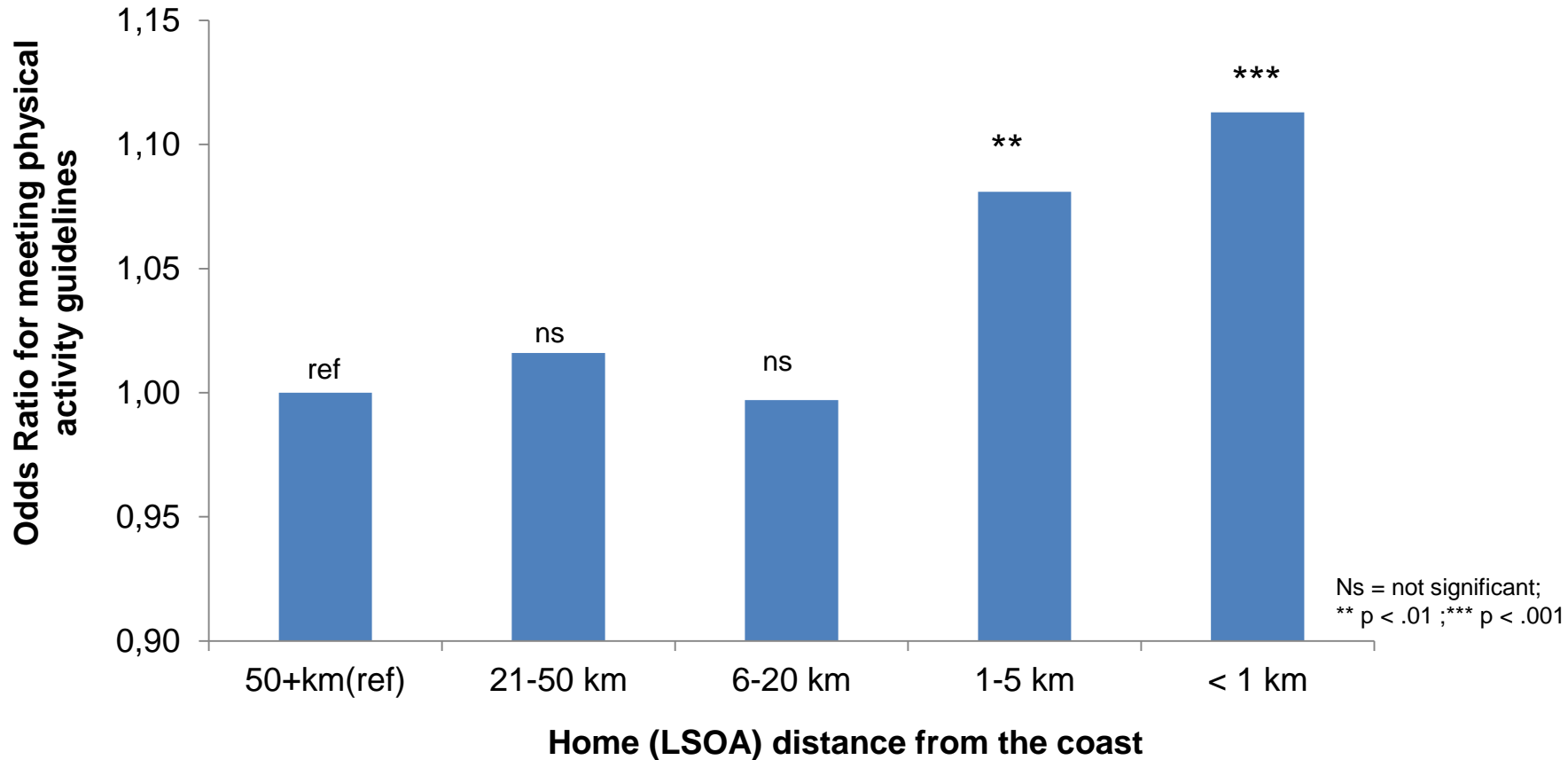




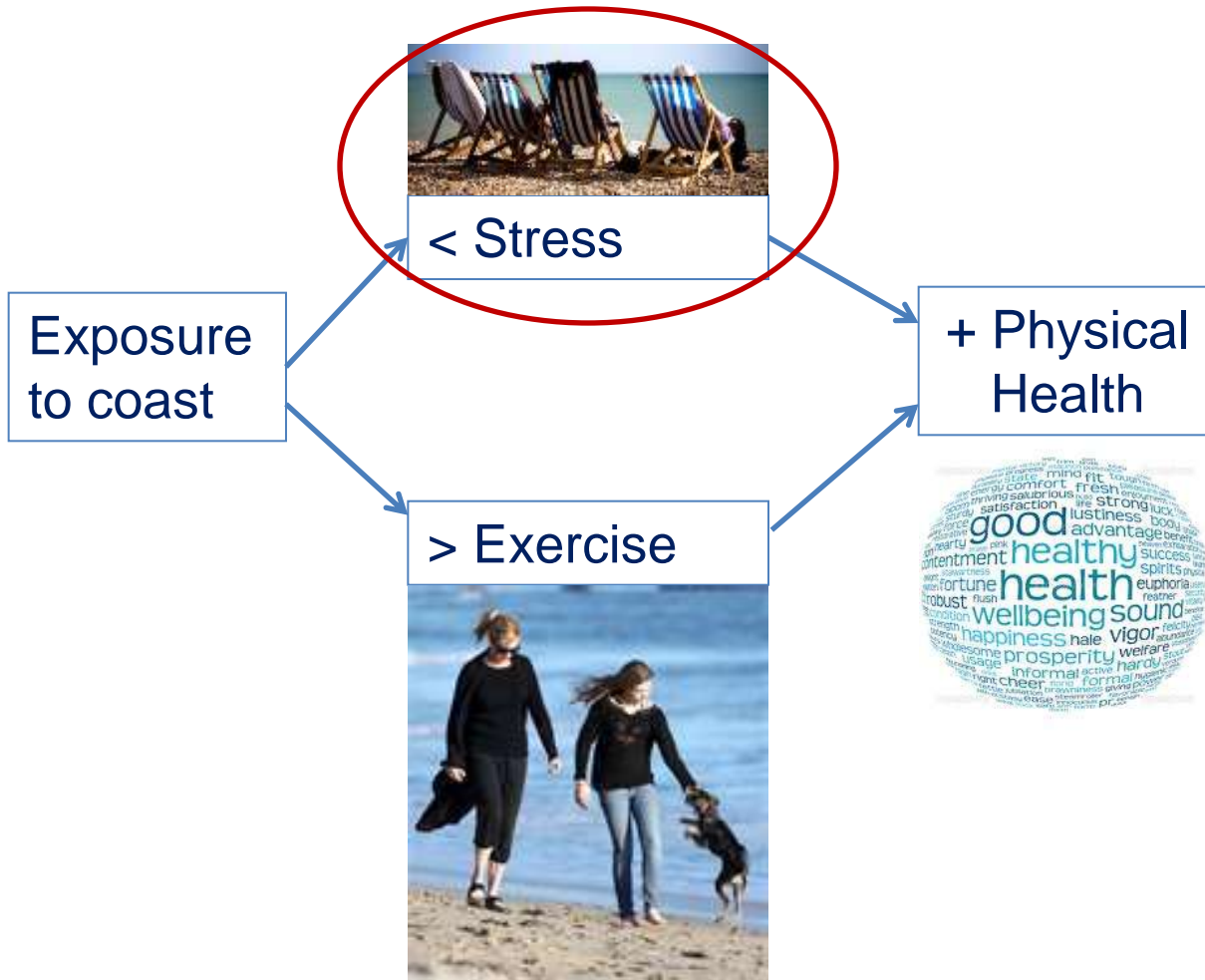
## Do people who live near the coast exercise more?

### Monitor of Engagement with the Natural Environment (MENE, n = 142,031)

NATURAL  
ENGLAND



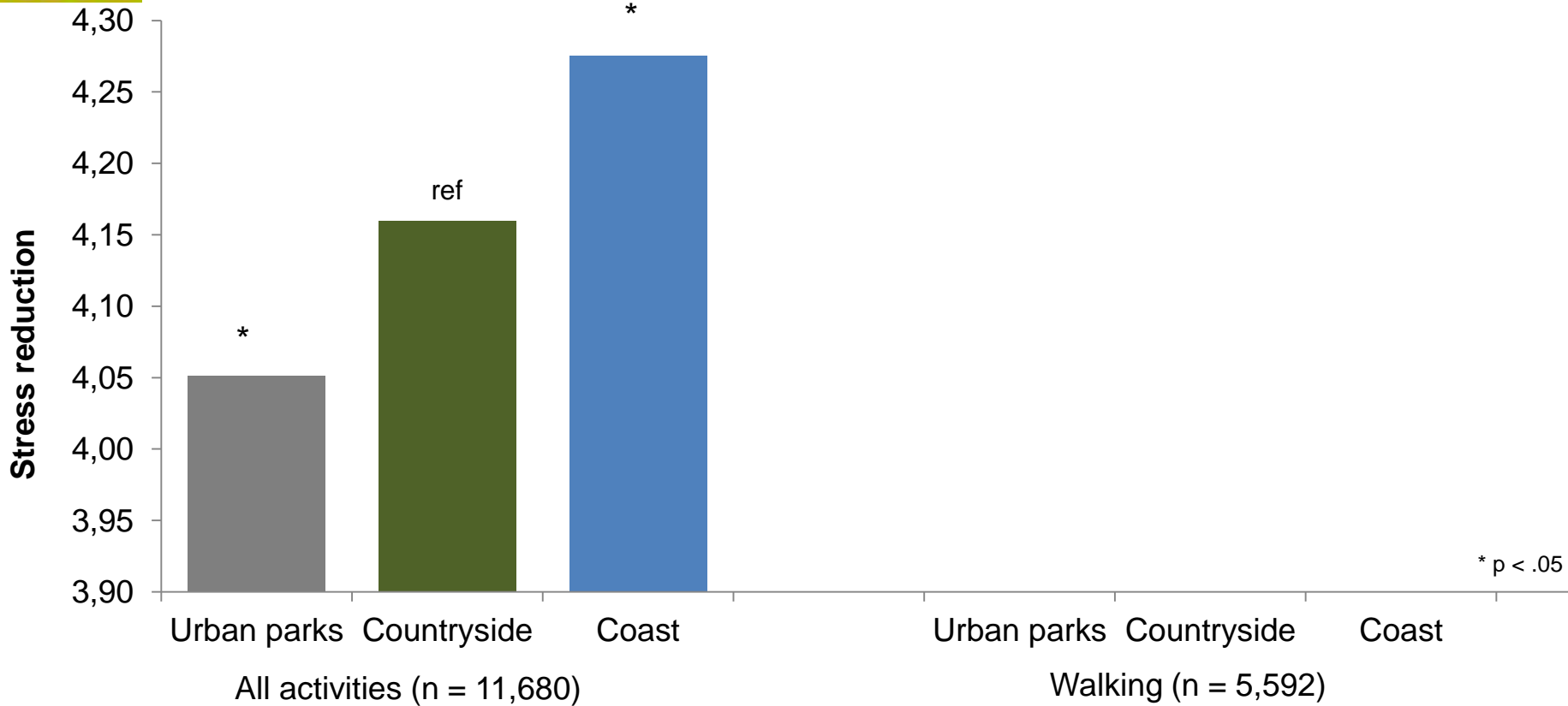
**PEOPLE WHO LIVE NEAR THE COAST ARE MORE PHYSICALLY ACTIVE**





## Monitor of Engagement with the Natural Environment (visits n = 11,680)

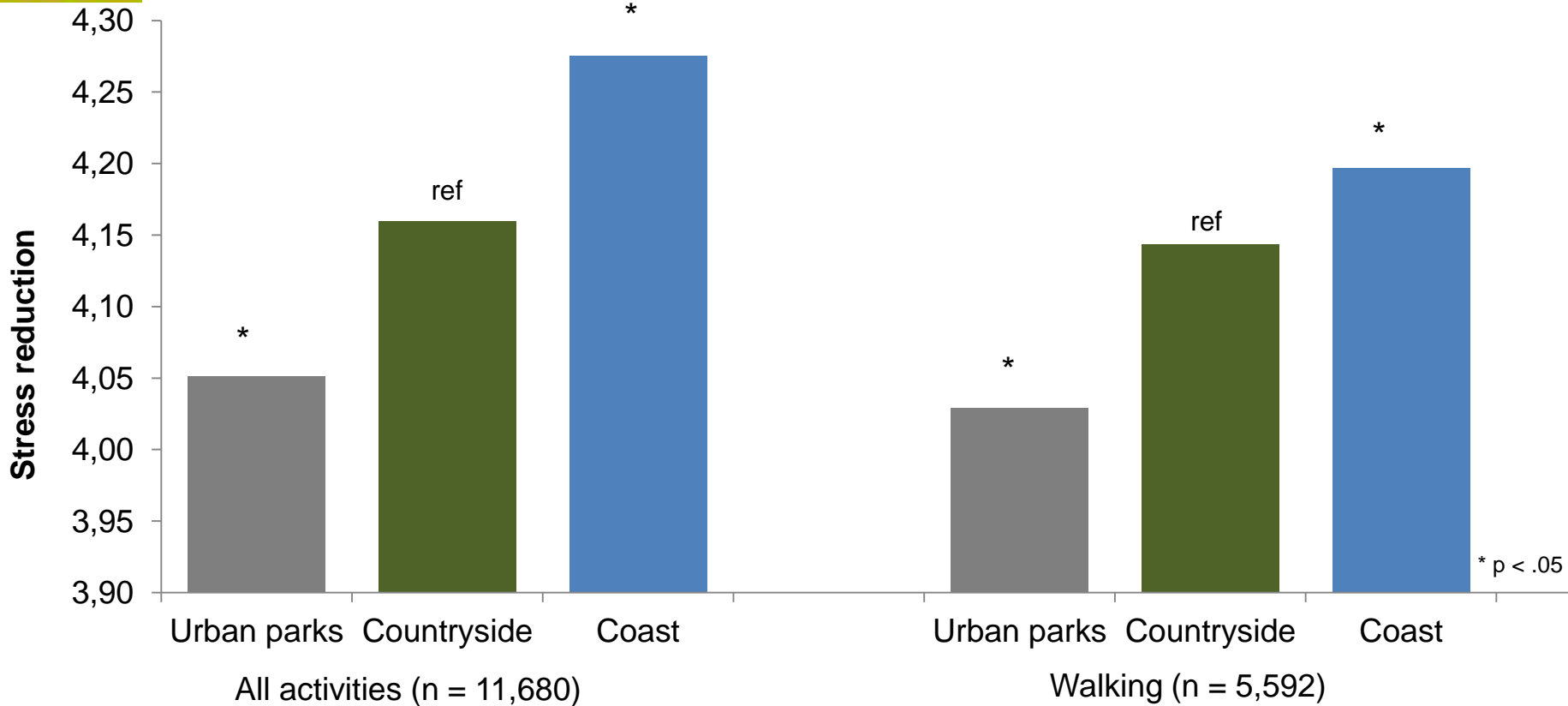
NATURAL  
ENGLAND





## Monitor of Engagement with the Natural Environment (visits n = 11,680)

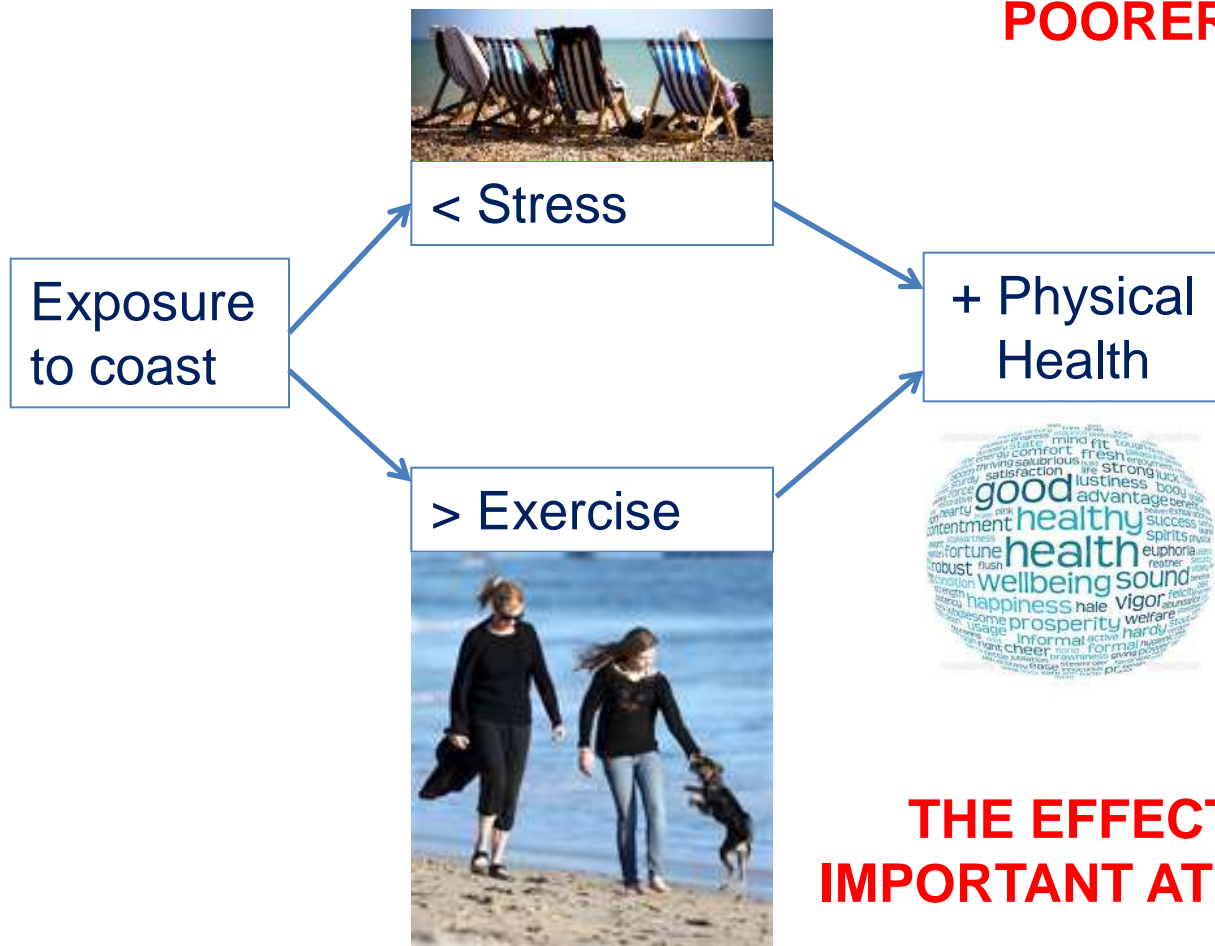
NATURAL  
ENGLAND



**VISITING THE COAST IS PARTICULARLY STRESS REDUCING**



**THE EFFECTS ARE STRONGESTS IN  
POORER COMMUNITIES**



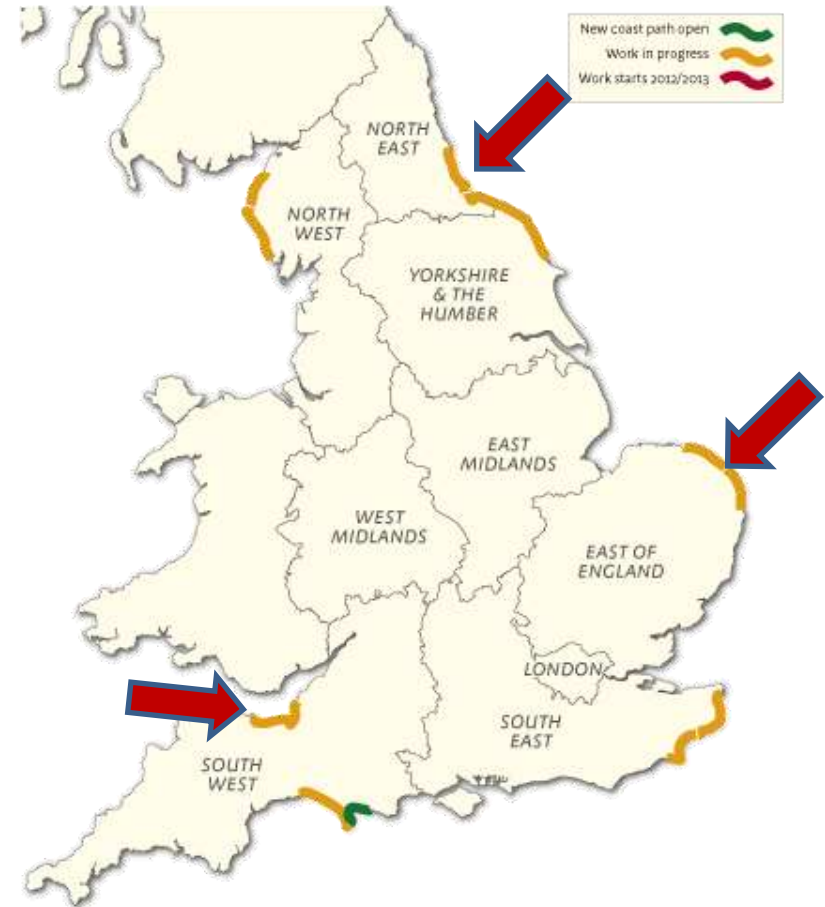
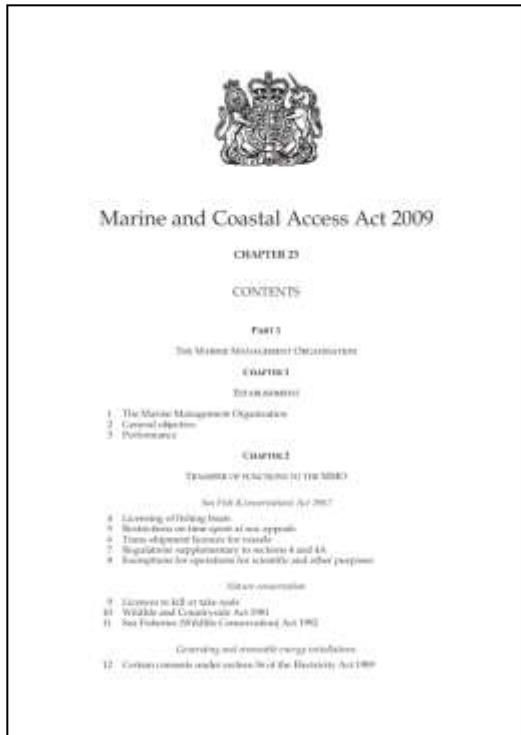
**THE EFFECTS ARE SMALL BUT  
IMPORTANT AT A POPULATION LEVEL**



## 2 key questions under investigation:

a) Will improving coastal access improve population health?





## COastal AccesS Trial (COAST)

What impact will improved coastal access have on the health & well-being of deprived coastal communities?

Areas of relative deprivation to be monitored in the proposed research



## 2 key questions under investigation:

a) Will improving coastal access improve population health?

**b) Can we bring the coast inland/indoors?**



## Dental RCT



### Outcomes

Pain

Ease of treatment

Keep appointments



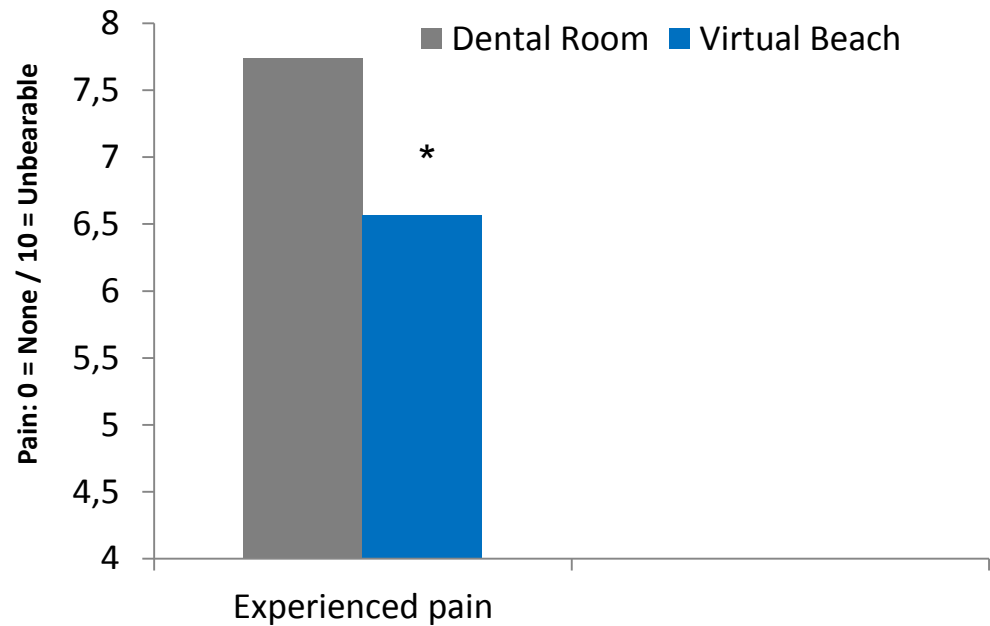
Dental room



Virtual beach



Iced water



\*  $p < .05$ ; \*\*  $p < .01$



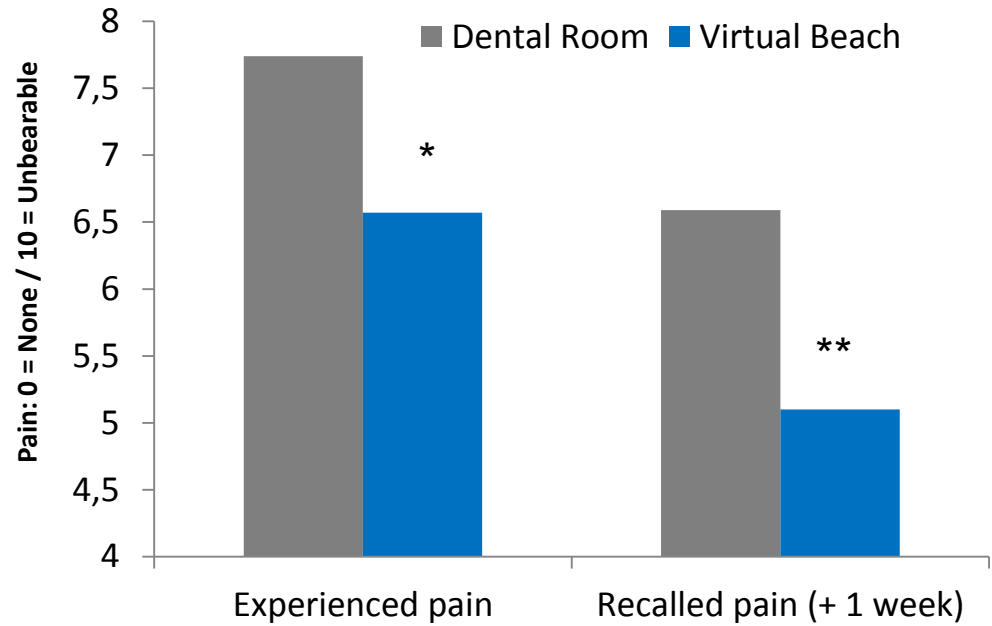
Dental room



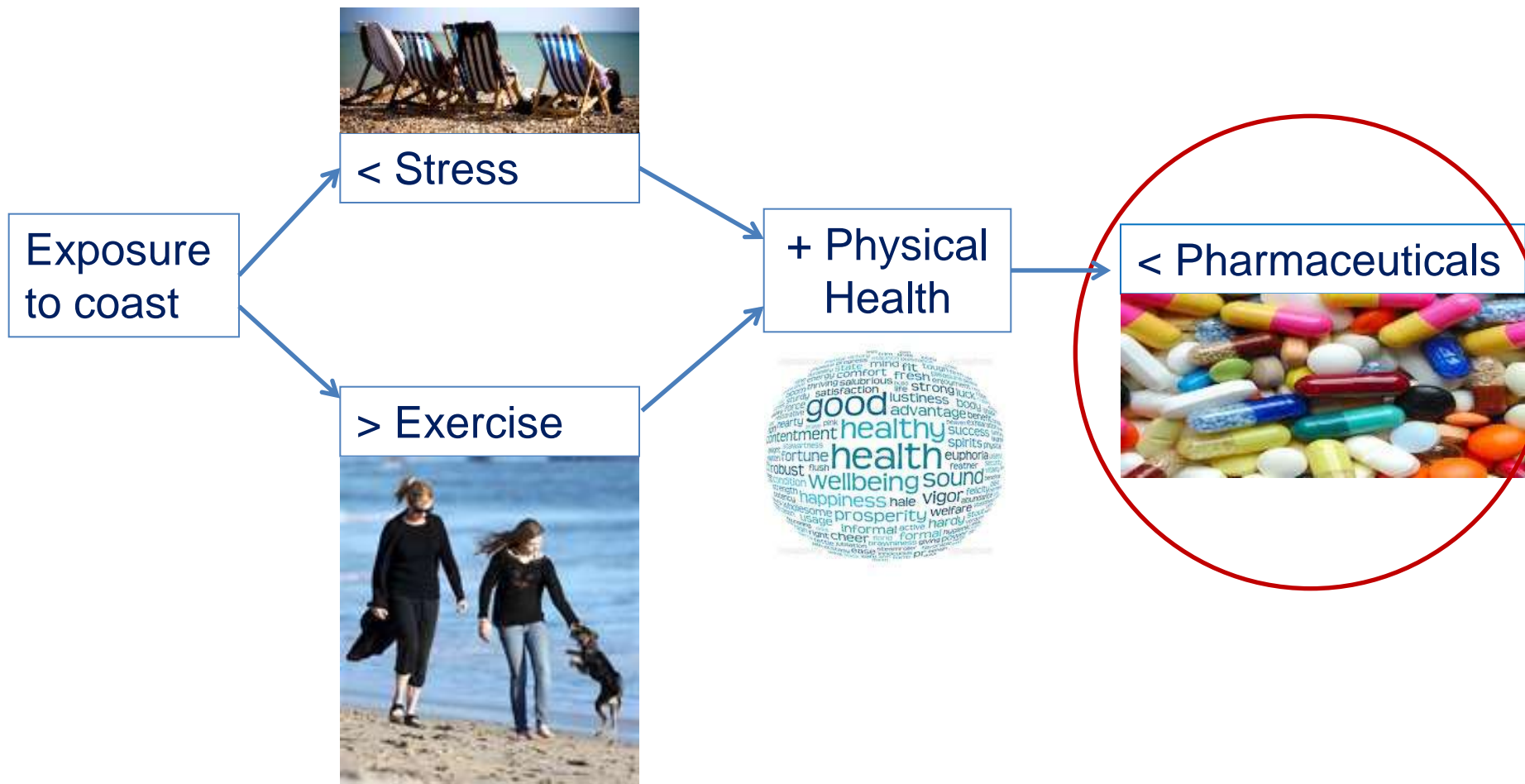
Virtual beach



Iced water



\*  $p < .05$ ; \*\*  $p < .01$





- 1) Other European countries?
- 2) What is the optimal dose?
- 3) How long do effects last?
- 4) What about children?
- 5) Environmental impact?
- 6) Comparisons to drugs (e.g. depression)?**



Thanks very much for your attention

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