

# A Dose of Nature

Nature-based Interventions on Referral

The Evidence Base  
for a Dose of Nature

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**WHAT IS 'EVIDENCE' AND WHERE  
DOES IT COME FROM?**

**THE INEVITABLE FALLBACK POSITION OF THE  
ACADEMY**

**STRUCTURAL POWER AND FINANCIAL ENGINES:**

**who asks what, how often and to what end?**

## **SOME BOLD STATEMENTS:**

- **a social prescription from a GP results in patient benefits additional to GP care alone (Grant 2000)**
- **spending time in forests reduces hypertension and improves immune function (Mao 2012, Li 2010)**
  - **group walks in nature are associated with lower depression, before and after controlling for covariates (Marselle 2014)**
- **exposure to nature improves attention restoration (Berman 2008)**
- **exposure to nature reduces the experience of pain (Diette 2003)**



## Access to Evidence

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# Natural England Access to Evidence Notes

Notes to improve access to the evidence that Natural England generates and uses.

## Records for this category

	Title	Code	Published
	<a href="#">Connection to Nature: evidence briefing</a>	FIN015	2016/07/14

THERE IS A CONNECTION TO NATURE THAT IS ASSOCIATED WITH HEALTH AND WELLBEING

THERE IS A POSITIVE ASSOCIATION BETWEEN NATURAL ENVIRONMENTS AND OBESITY

ON BETWEEN NATURAL ENVIRONMENTS AND MENTAL

EXPOSURE TO NATURAL ENVIRONMENTS IS ASSOCIATED WITH GOOD PHYSIOLOGICAL HEALTH

RELATIONSHIP BETWEEN NATURAL ENVIRONMENTS AND

**BASIC QUESTIONS: IS THERE A 'CONNECTION TO NATURE'? IS IT GOOD FOR HEALTH?**

**KIND OF.**

*There is emerging evidence that connection to nature is associated with certain wellbeing, educational outcomes and pro- environmental behaviours.*

## WHAT ABOUT OBESITY?

### A MODERATE QUANTITY OF EVIDENCE.

*Some RCTs demonstrating a positive (but usually weak) association between natural environments and rates or prevalence of obesity; it is indicative of a relationship.*

*Also some evidence that impacts vary according to socio-economic group.*

**AND HOW ABOUT MENTAL HEALTH?**

**EVIDENCE IS GROWING AND A POSITIVE ASSOCIATION**  
*age or gender. Nature-based interventions for mental health*  
*of environment (coastal, mountain, woodlands), and better*



## PHYSIOLOGICAL HEALTH...

**EVIDENCE BASE IS STRONG, BUT AGAIN ESSENTIALLY INDICATIVE OF RELATIONSHIPS.**

*At a population level, higher levels of exposure to natural environments are associated with: lower all-cause mortality (strong and consistent); rates of T2 diabetes (small number of studies); cardiovascular and respiratory disease, and more positive maternal and pregnancy outcomes (all less, but present and positive). Less is known about cancer, musculoskeletal health, allergies, or of the impact of different types of environment or of variation between different socio-demographic groups.*

## AND FINALLY PHYSICAL ACTIVITY.

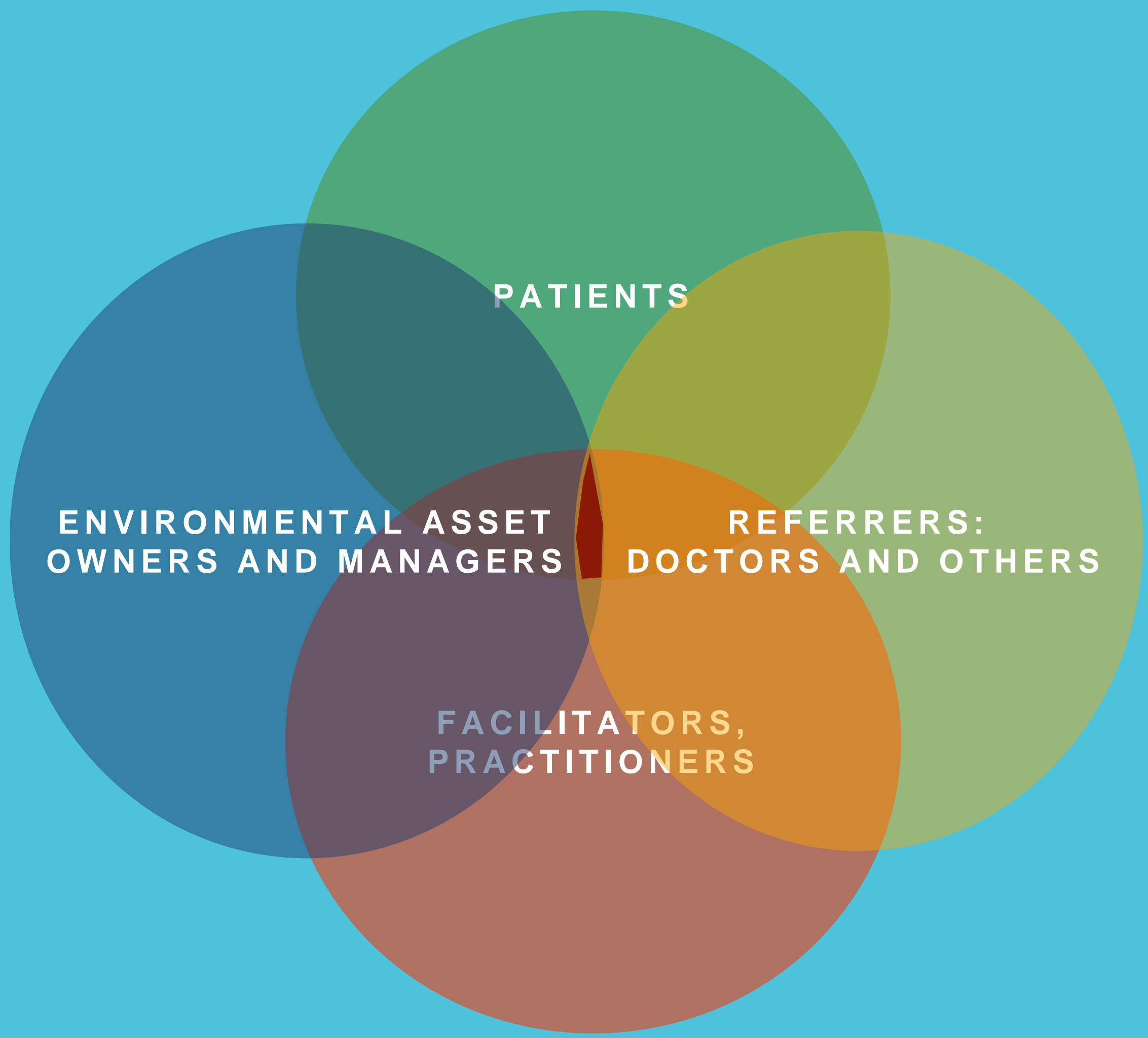
### A SUBSTANTIAL BODY OF EVIDENCE:

*The use of accessible, better quality natural environments is associated with a higher likelihood and rates of physical activity. Evidence also suggests that physical activity in natural environments is more beneficial to health than that undertaken elsewhere. Some evidence demonstrates the impacts and cost- effectiveness of different intervention options designed to increase physical activity in natural environments.*

*But we don't know for sure whether greater amount of natural environments around the home promote higher levels of physical activity.*

# CAVEAT PETITOR!

- FEW STUDIES
- SMALL STUDIES
- STUDIES THAT DO NOT SHOW  
DIRECTION OF EFFECT OR CAUSALITY
- LACK OF ADJUSTMENT OF  
CONFOUNDERS
- A-TYPICAL SAMPLE SIZES



# **A Dose of Nature**

## **Nature-based Interventions on Referral**

- **Eight pilots across Cornwall, Devon & Bristol**
- **Each involving GPs, environmental partners and intervention practitioners**
  - **£317 per patient per 12 weeks average**
  - **WEMWBS average shift from 28 to 47 (+19; average UK is 51; n=39)**
    - **website, network, Crowdfunder**

# **FIRST PHASE: BUILD CAPACITY...**

- **NERC KE Fellowship, VNP Placement and Innovation Internship**
  - **Eight pilot partnerships referral schemes across Cornwall, Devon & Bristol**
    - **£317 per patient per 12 weeks average**
- **WEMWBS average shift from 28 to 47 (+19; average UK is 51; n=39)**
  - **website, network**



# A DOSE OF NATURE

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**A Dose of Nature is all about using outdoor natural environments to improve health and wellbeing. It's a service, a network and a research project.**

## BLOG.

Anything we think is interesting and relevant, whether from research, practice or the media. If you want to know when something's been added here, then why not sign up to receive email updates? It's free.



## **EMERGING QUESTIONS:**

### **THE MONEY QUESTION**

**How can any social prescription service receive money from health?**

### **THE CATEGORY QUESTION**

**Are nature-based interventions about preventing or treating health problems?**

### **THE DEFINITION QUESTION**

**How specific should nature-based intervention actually be? What counts?**

### **THE CO-BENEFIT QUESTION**

**What environmental gains can be made (and measured?)**



## **SECOND PHASE: ENTER THE MAINSTREAM**

- **Realist Systematic Review on social prescribing referral mechanisms (PenCLAHRC and NIHR)**
  - **Intervention Mapping proposal to NIHR (November)**
- **Nature and Health Hub: developing a business case for a service offer, with Cornwall Council and health sector partners**



Conclusions...

Next steps...