

# Sun exposure for vitamin D sufficiency in skin type V

<b>Submission date</b> 12/05/2010	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 12/05/2010	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 26/04/2013	<b>Condition category</b> Skin and Connective Tissue Diseases	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**Protocol serial number**  
5625

## Study information

**Scientific Title**  
Sun exposure levels for provision of vitamin D sufficiency in people of skin type V living in the UK

**Study objectives**

1. What is the effect on vitamin D status in people of skin type V, of the amount of UV exposure recommended for white Caucasian subjects, and how much extra UV exposure do skin type V people require?

Intervention study:

A UV course will be given to 60 subjects in January/February, using a whole body cabinet with lamps emitting a UV spectrum similar to sunlight. Blood 25(OH)D levels measured weekly.

2. What levels of vitamin D are attained through natural sunlight exposure in skin type V individuals living in the UK? How do these relate to personal UV exposure doses? Does the relationship differ from that in white Caucasian individuals?

Observation study:

125 subjects will have blood 25(OH)D levels assessed once in each season, UV exposure measured through polysulphone badges and dietary vitamin D assessed through diet diaries.

The results of the experimental work in the intervention study can be related to the findings of the real population in the observation study. Moreover, both studies in skin type V volunteers can be related to the findings of the equivalent studies in the white Caucasian subjects.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

North Manchester Research Ethics Committee approved on the 20th May 2008 (ref: 08/H1006 /24)

### **Primary study design**

Observational

### **Study design**

Single centre non-randomised prevention and treatment trial

### **Study type(s)**

Treatment

### **Health condition(s) or problem(s) studied**

Topic: Skin; Subtopic: Skin (all Subtopics); Disease: Dermatology

### **Interventions**

1. Intervention study:

1.1. Subjects were given simulated summer's sun exposures from a constant UVR dose via a full body cabinet, 3 times a week for 6 weeks. The subjects were split into 6 groups receiving either 0.65, 1.3 1.95, 2.6, 3.2, 3.9 SED. This was given in Jan/Feb, when there is no confounding ambient UVR

1.2. Vitamin D (25(OH)D) blood samples were taken pre-intervention and then weekly for 6 weeks

1.3. Patients completed diet diaries (1st week and 6th week) to assess dietary vitamin D

2. Observational study:

2.1. Vitamin D (25(OH)D) blood samples were taken in each season of the year (April - Spring,

July - Summer, October - Autumn, January - Winter)

2.2. The subjects were also given polysulphone film badges to wear on their clothes for one week in each season to measure ambient UV

2.3. Sun exposure diaries were also used to give additional information about seasonal UV exposure

2.4. A diet diary was completed in each season for dietary vitamin D assessment.

Follow up was for one year.

The interventional follow up was for 7 weeks, the actual intervention (not treatment) was carried out over 6 weeks.

### **Intervention Type**

Supplement

### **Phase**

Not Applicable

### **Drug/device/biological/vaccine name(s)**

Vitamin D

### **Primary outcome(s)**

1. Intervention study: % number of people reaching sufficient levels of vitamin D following simulated summer exposure

2. Observational study: the post summer vitamin D level required to maintain sufficiency throughout the winter months

### **Key secondary outcome(s)**

Interventional study:

1. The % numbers reaching optimal levels of vitamin D following simulated summer sun exposure

2. Baseline winter levels of vitamin D deficiency, sufficiency and optimal levels

### **Completion date**

30/05/2009

## **Eligibility**

### **Key inclusion criteria**

1. Aged 18 - 65 years old

2. South Asian descent

3. Male or female

4. Sun-reactive skin type V

5. Ambulant

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

**Lower age limit**

18 Years

**Sex**

All

**Key exclusion criteria**

1. History of skin cancer (intervention study)
2. History of a photosensitivity disorder (both)
3. Regular sunbathing/use of sunbeds (observational study)
4. Sunbathing/use of sunbeds in the past 3 months (intervention study)
5. Taking photoactive medication (interventional)
6. Pregnant or breast-feeding (interventional)

**Date of first enrolment**

01/09/2008

**Date of final enrolment**

30/05/2009

**Locations**

**Countries of recruitment**

United Kingdom

England

**Study participating centre**

**Photobiology Unit**

Salford

United Kingdom

M6 8HD

**Sponsor information**

**Organisation**

University of Manchester (UK)

**ROR**

<https://ror.org/027m9bs27>

# Funder(s)

## Funder type

Charity

## Funder Name

Cancer Research UK (CRUK) (UK)

## Alternative Name(s)

CR\_UK, Cancer Research UK - London, Cancer Research UK (CRUK), CRUK

## Funding Body Type

Private sector organisation

## Funding Body Subtype

Other non-profit organizations

## Location

United Kingdom

# Results and Publications

## Individual participant data (IPD) sharing plan

### IPD sharing plan summary

#### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/11/2011		Yes	No
<a href="#">Results article</a>	results	01/06/2013		Yes	No