Sunlight Robbery

The importance of sunshine & vitamin D for mental and physical health.

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In search of evidence-based Public Health policy
In Africa the sun is strong enough to provide vitamin D all year round
Modern man first came to northern Europe 20,000 years ago

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Cloud cover from wet westerly winds gives Glasgow 50% less UVB than Lund on the same latitude in Sweden.
rain, drizzle, precipitation, shower, spit, pissing down, bucket down, torrent, driving rain, Scotch mist, raining cats and dogs, pouring down, sprinkle, drop, hail, flood, deluge, barrage, Monsoon, mizzle, sleet, downpour, drop, pelting down, cloudburst, drencher, flurry, heavy dew, sheets, spate, stream, patter, cloud, fog, haze, mist, vapour, smog, spray, miasma, murk, harr (sea mist), brume, overcast
An Inuit (Eskimo) seal hunter
Clothes reduce sun exposure by about 80 %

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Knock kneed sheep with rickets
London before Clean Air Acts
Rickets – classical disease of 19th century slums

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UV “ray treatment” at Child Welfare Centre, London, 1938
Queuing up for cod liver oil
1942
1950s and before – boys wore shorts – girls didn’t wear tights and leggings

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The Bikini – invented by French engineer 1945

Louis Réard  Micheline Bernardini
Rickets – has returned
Vitamin D controls the cell cycle and six physiological systems

CALCIUM homeostasis
IMMUNE system
PANCREAS beta cells
HEART and blood vessels
MUSCLE development and strength
BRAIN development

From Norman and Bouillon Exp Biol Med 2010

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Vitamin D related diseases

- Bone diseases
- Cancer
- Multiple sclerosis
- Polycystic ovary syndrome
- Infections: TB, flu
- Crohn’s disease
- Diabetes 1&2
- Hypertension
- Cardiovascular disease
- Arthritis
- Depression
- Schizophrenia

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Gwyneth Paltrow suffered from D deficiency, osteoporosis and fracture
Faye Dunaway shows off her youthful face - but her hands reveal her true age

Daily Mail
Dec 2007

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What can you do?
Its swine flu.

Jacqueline du Pré – talent and tragedy

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MS: Excess late spring birthdays

Fig 1 Pooled analysis of observed/expected births in people with multiple sclerosis in Canadian, British, Danish, and Swedish, studies (n=42 045) with 95% confidence intervals
US soldier in full kit – low vitamin D
Deductive Proof: Sir Austin Bradford Hill’s criteria for causality

- strength of association
- consistency
- temporality
- dose response
- plausibility
- coherency

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Do Ethiopian and Kenyan runners benefit from intense UVB at altitude?


Major ‘Lifestyle’ Risk Factors for Health

- Smoking tobacco
- Overeating – obesity
- “Modern industrial” diet
- Alcohol and illegal drugs
- Insufficient vitamin D

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Failure No 1

Healthy Start children’s vitamins cannot be sold in either pharmacies or supermarkets so go to restricted number of mothers and babies
Failure No. 2: its impossible to get more than 5-10% of optimum D from diet

Population levels of vitamin D need to be raised by development of fortified foods
Failure No. 3

No supplements advised by govt for normal adults – leaves people vulnerable to falls, fractures, and deformed bones.
Failure No 4: Denial that a tan is natural and a sign of good health.

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Girls Aloud show skin fashions
Russians welcome the early spring sun at Peter and Paul Fortress, St Petersburg
Panther chameleon - *Furcifer pardalis*

Chameleons alter their sunbathing behaviour to regulate their requirement for vitamin D

Camilla and athletes at Delhi Commonwealth Games 2010
Manchester United - Rio Ferdinand

Manchester United now provide sunlamp treatment for their players and especially recommend it for players with dark skin.
This talk is evidence-based


Bare faced cheek

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The End. Thank you for listening.
The SunSmart policy: Darkness at noon

Pre-2006
• Stay in shade between 11am and 3pm
• Always cover up
• Then use factor 15 sunscreen

After-2006
• Spend time in the shade between 11am and 3pm
• Aim to cover up with T-shirt, hat
• Then use factor 15+ sunscreen

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Failure No. 1

Babies need vitamin D from first week of life