



World Health  
Organization

# Artificial tanning devices

Public health interventions  
to manage sunbeds





# Artificial tanning devices

Public health interventions  
to manage sunbeds

Artificial tanning devices: public health interventions to manage sunbeds

ISBN 978-92-4-151259-6

© World Health Organization 2017

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

**Suggested citation.** Artificial tanning devices: public health interventions to manage sunbeds. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.

**Cataloguing-in-Publication (CIP) data.** CIP data are available at <http://apps.who.int/iris>.

**Sales, rights and licensing.** To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

**Third-party materials.** If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

**General disclaimers.** The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Cover photos © Shutterstock.

Design and layout by L'IV Com Sàrl, Villars-sous-Yens, Switzerland.

Printed by the WHO Document Production Services, Geneva, Switzerland.

# Contents

<b>Foreword</b>	3
<b>Acknowledgements</b>	4
<b>1. Introduction</b>	7
1.1. The purpose of this document	8
1.2. The use of sunbeds	9
1.3. The type of radiation emitted by sunbeds	9
<b>2. Health consequences from sunbed use</b>	11
2.1. Cancer risk	12
2.2. Vitamin D production	13
2.3. Populations most at risk from sunbed use	14
<b>3. Policy options to decrease health risks from sunbeds</b>	17
3.1. Promoting education strategies	18
3.2. Regulating sunbed use	20
3.2.1. Regulatory frameworks	20
3.2.2. Banning sunbeds	21
3.2.2.1. Banning all artificial tanning services	21
3.2.2.2. Banning the hire and sale of sunbeds for domestic use	21
3.2.3. Restricting access to sunbeds	21
3.2.3.1. Prohibiting unsupervised artificial tanning services	21
3.2.3.2. Setting an age-limit on sunbed use	22
3.2.3.3. Preventing use of sunbeds by high-risk individuals	22
3.2.4. Managing sunbed operations	22
3.2.4.1. Surveillance and licensing of tanning establishments	22
3.2.4.2. Controlling UV exposure	22
3.2.4.3. Requiring eye protection	24
3.2.4.4. Training sunbed supervisors	25
3.2.4.5. Taxing tanning sessions	25
3.2.5. Prescribing risk communication	25
3.2.5.1. Requiring information provision	25
3.2.5.2. Banning marketing and promotion of sunbeds	25
3.2.5.3. Requiring display of warning notices	25
3.2.6. Ensuring compliance and enforcement	27

<b>4. Discussion</b> . . . . .	29
4.1. Public health financing considerations . . . . .	30
4.2. Commercial considerations . . . . .	30
4.3. Human rights implications and ethical considerations . . . . .	30
4.4. Priority areas for research . . . . .	31
<b>References</b> . . . . .	32
<b>Abbreviations</b> . . . . .	37
<b>Glossary</b> . . . . .	38
<b>Annex 1. Summary of health risks other than cancer</b> . . . . .	39
A.1. Skin . . . . .	39
A.2. Eyes . . . . .	39
A.3. Other health effects . . . . .	40
References . . . . .	40
<b>Annex 2. Example of client information form (Ireland)</b> . . . . .	42

# Foreword

Artificial tanning is a recent phenomenon. Sunbeds and other tanning devices emitting artificial ultraviolet radiation (UVR) were developed in the 1960s but it was not until the 1980s that people began to use tanning beds in large numbers. During the 1990s, the artificial tanning industry grew rapidly in Northern Europe, Australia and the Americas. With increasing exposure by young people, often women, to artificial ultraviolet radiation, the health risks soon became apparent. Artificial tanning is now seen as a public health issue accounting for about half a million new cancer diagnoses each year in the United States of America, Europe and Australia. Evidence of an association between artificial tanning and risk of skin cancer clearly shows that the risk is highest in those exposed to artificial tanning in early life.

In 2003, the World Health Organization (WHO) responded to this growing public health challenge by publishing a guidance document on sunbed legislation, *Artificial Tanning Sunbeds, Risks and Guidance*. In addition, WHO's International Agency for Research on Cancer (IARC) classified exposure to UV-emitting tanning devices (sunbeds) as carcinogenic to humans in 2009. Since then, momentum has been building among policy-makers to regulate sunbed use and now more than 40 national or provincial authorities around the world have implemented outright bans or restrictions on the use of sunbeds.

In line with the United Nations Sustainable Development Goal (SDG) on good health and well-being, WHO is strongly committed to reducing premature mortality from noncommunicable diseases, including cancer, through various prevention and control strategies (SDG indicator 3.4). This booklet is intended to provide policy-makers with information on the health risks from sunbed use, and how some countries have tackled this challenge through a number of public health interventions. Governments and other stakeholders have a key role to play in addressing and challenging the myths and behaviours related to sunbed use, often by youth, which contributes to increasing morbidity and mortality while providing no clear benefit beyond cosmetic outcomes.



**MARIA NEIRA**  
**DIRECTOR**  
**DEPARTMENT OF PUBLIC HEALTH, ENVIRONMENTAL**  
**AND SOCIAL DETERMINANTS OF HEALTH**  
WORLD HEALTH ORGANIZATION

# Acknowledgements

This document was prepared by Emilie van Deventer (WHO Department of Public Health, Environmental and Social Determinants of Health) and Craig Sinclair (Cancer Council Victoria, WHO Collaborating Centre for UV radiation).

WHO thanks the following WHO collaborating centres for their technical assistance and support: Australian Radiation Protection and Nuclear Safety Agency, Australia (P. Gies, R. Tinker); Cancer Council Victoria, Australia (K. Dunstone, A. Nicholson, C. Sinclair); Universidad Mayor de San Andres, Bolivia (L. Blacutt); Association Sécurité Solaire, France (M. Boniol, JP. Césarini, P. Césarini, JF. Doré); Federal Office of Radiation Protection, Germany (C. Baldermann, D. Weiskopf); Federal Office of Public Health, Switzerland (D. Storch) and Public Health England, United Kingdom of Great Britain and Northern Ireland (M. Khazova, J. O'Hagan).

Contributions to the report were provided through consultation with external experts within the framework of the WHO INTERSUN programme. The inputs received from Member State agencies are greatly appreciated. These included the Federal Ministry of Health and Women's Affairs, Austria (N. Leitgeb, M. Renhardt); the National Centre of Public Health and Analyses, Bulgaria (M. Israel); Health Canada (J. McNamee, S. Qutob), the Office of the Chief Medical Officer of Health of New Brunswick (S. Hamel), Canada; the Danish Health Authority, Denmark (P. Søggaard Thygesen); the Radiation and Nuclear Safety Authority, Finland (R. Visuri); the Agency for Food, Environmental and Occupational Health and Safety, France (J. Fite); the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Germany (B. Keller); the Greek Atomic Energy Commission, Greece (E. Karabetzos), the Department of Health, Hong Kong Special Administrative Region, China (YK. Wan); the Radiation Safety Authority, Iceland (S. Magnússon); the Department of Health, Ireland (G. Connolly); the Environmental Protection Agency, Ireland (B. Rafferty); the Israeli National Information Centre for Non-Ionizing Radiation, Israel (S. Sadetzki); Tuscany region, Italy (I. Pinto); the Ministry of Health, Italy (P. Rossi); the Ministry of Health, New Zealand (M. Gledhill); the Norwegian Radiation Protection Authority, Norway (LT. Nilsen, TM. Sjømoen); the Swedish Radiation Safety Authority, Sweden (J. Gulliksson); the Ministry of Health, Turkey (E. Hacikamiloğlu); the Department of Health of Northern Ireland (N. McMahan), the Population Health Directorate of the Scottish Government (M. Stewart), United Kingdom of Great Britain and Northern Ireland; the Food and Drug Administration,

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_26383](https://www.yunbaogao.cn/report/index/report?reportId=5_26383)

