

## **British Photodermatology Group Position Statement:**

### **Sunbeds**

The British Photodermatology Group (BPG) and the British Association of Dermatologists (BAD) advocate for a complete ban on commercial sunbeds in the United Kingdom to protect public health and reduce the incidence of skin cancer and eye disease.

#### **Background:**

- Ultraviolet (UV) radiation, including that emitted by sunbeds, has been classified as carcinogenic to humans by the International Agency for Research on Cancer.<sup>1</sup>
- Sunbed use is associated with significant increased risk of melanoma and non-melanoma skin cancers, particularly for those who start using sunbeds at a young age.<sup>2,3</sup>
- Despite existing regulations in the UK restricting sunbed use for under-18s, compliance and enforcement is inadequate. A complete ban is the only way to ensure young people are protected from the significant health risks associated with sunbed use.
- Several countries including Australia and Brazil have already implemented successfully total bans on commercial sunbeds. The Republic of Ireland is currently working towards legislation implementing a ban on solaria too. The UK should follow their lead in prioritizing public health over commercial interests.

#### **Key Evidence:**

##### **Cancer Risk:**

- Sunbed use before age 35 increases lifetime melanoma risk by as much as 75%.<sup>4</sup>
- Regular sunbed use in all users is associated with a 20% increased risk of melanoma.<sup>5</sup>
- The risk of squamous cell carcinoma is more than doubled in sunbed users compared to non-users.<sup>6</sup>
- It is estimated that sunbed use causes over 450,000 non-melanoma skin cancer cases and 10,000 melanoma cases annually in the US, Europe and Australia combined.<sup>6</sup>
- There are 17,500 new melanoma cases in the UK per year and 2300 deaths. 6% of these are estimated to be caused by sunbeds – roughly 100 deaths per year.<sup>7</sup>
- Over the past 30 years, malignant melanoma skin cancer incidence has roughly tripled in the UK.<sup>7</sup>
- Epidemiological studies have found an increased risk of ocular melanoma with sunbed use, especially for those who started artificial tanning before 20 years of age.<sup>5,8</sup>

##### **Young People at Risk:**

- Young people, particularly women, are vulnerable to the harms of artificial tanning.<sup>9,10</sup>
- A recent survey demonstrated that up to 28% of 16-65 year olds in the UK have used a sunbed.<sup>9</sup> This is an increase on previously published survey data in UK adults.<sup>11-13</sup>
- Early sunbed use is associated with the highest increase in skin cancer risk.<sup>2,3,14</sup>
- Sunbed use is addictive and associated with smoking, excessive alcohol consumption, and other unhealthy behaviours.<sup>15-17</sup>

### **Lack of Health Benefits:**

- There are no proven health benefits from sunbed use that cannot be obtained more safely through other means.
- Claims of benefits like vitamin D production are not supported by evidence and do not outweigh the risks.<sup>18, 19</sup>

### **Ineffectiveness of Current Regulations:**

- Existing age restrictions and guidelines have proven difficult to enforce effectively.<sup>20</sup>
- Studies show poor compliance with regulations by sunbed operators.<sup>1, 21, 22</sup>
- Self regulation has proven ineffective: Only 16% of sunbed operators in Northern Ireland are currently members of the voluntary Sunbed Association.<sup>23</sup>
- This situation is mirrored across the UK where local authorities report that licensing sunbeds has proved impossible to implement.<sup>20</sup>
- A complete ban is the most straightforward way to eliminate this preventable cancer risk.

### **Economic Impact:**

- Skin cancer treatment places a significant burden on the NHS.
- A ban would likely be cost-effective by reducing future healthcare expenditures related to skin cancer treatment.<sup>24, 25</sup>
- The annual cost to the health system for avoidable skin cancer cases and deaths due to sunbed use is estimated to be in the millions of pounds.<sup>24, 25</sup>

### **Public Health Benefits of a Ban:**

1. **Cancer Prevention:** A ban would prevent thousands of skin cancer cases annually in the UK, including life-threatening melanomas.<sup>5</sup>
2. **Protection of Young People:** It would eliminate access to a known carcinogen for young people who are most vulnerable to the harms.<sup>9</sup>
3. **Healthcare Cost Savings:** Reducing skin cancer incidence would result in significant savings for the NHS in treatment costs.<sup>24, 25</sup>
4. **Clear Public Health Message:** A ban would send an unambiguous message about the dangers of artificial tanning and help shift cultural attitudes to suntanning in general.
5. **Simplified Enforcement:** A complete ban is more straightforward to implement and enforce than complex regulations.

### **Cost-Effectiveness Analysis:**

A cost-effectiveness analysis of implementing a nationwide ban on commercial indoor tanning combined with a public information campaign in England found:

- Reductions of 4.8% in melanoma cases (n=1,206), 4.6% in melanoma deaths (n=207) and 3.3% in numbers of keratinocyte cancers (n=3,987) over the lifetime of the 2019 cohort of 18-year-olds.<sup>24</sup>
- An additional 497 quality-adjusted life years (QALYs) with a cost-saving to NHS England of £697,858.<sup>24</sup>
- An incremental net benefit of £10.6 million and a net health benefit of 530 QALYs.

- At a cost-effectiveness threshold of £20,000 per QALY, there is a 99% likelihood of the intervention being cost-effective.<sup>24</sup>

### **Implementation Considerations:**

- There are an estimated 5200 tanning shops in the UK, with a higher density in deprived areas. There are hotspots in the Northwest and Northeast of England.
- Provide a transition period for businesses to adapt and offer support for shifting to safer services like spray tanning.
- Implement strong enforcement mechanisms and penalties for non-compliance.
- Pair the ban with public education campaigns on the risks of UV exposure and importance of sun protection.<sup>24, 26, 27</sup>
- Consider restrictions on private sunbed ownership and use to prevent shifting the risk.
- Empower local authorities to enforce the ban, with powers to inspect premises and issue fixed penalty notices.
- The success of the banning of sunbeds in Australia provides a model for us to copy.<sup>27</sup>

### **Public Support:**

A survey by Cancer Research UK suggested that 90% of the public supported a ban on under 18s using sunbeds. 77% of dermatologists support a ban in the UK and 94% agree that unregulated tanning salons contribute to skin cancer cases.<sup>28, 29</sup>

### **Conclusion:**

Artificial tanning poses an unnecessary and preventable cancer risk, particularly to young people. Existing regulations have proven inadequate in protecting public health. A complete ban on commercial sunbeds is justified and necessary to reduce skin cancer incidence in the UK. We urge policymakers to take decisive action to protect public health by implementing a total ban on commercial sunbeds across the UK. This evidence-based, cost-effective policy would prevent needless suffering, save lives, and reduce healthcare costs.

### **References:**

1. El Ghissassi F, Baan R, Straif K, Grosse Y, Secretan B, Bouvard V, et al. A review of human carcinogens--part D: radiation. *Lancet Oncol.* 2009;10(8):751-2.
2. Boniol M, Autier P, Boyle P, Gandini S. Cutaneous melanoma attributable to sunbed use: systematic review and meta-analysis. *BMJ.* 2012;345:e4757.
3. Wehner MR, Shive ML, Chren MM, Han J, Qureshi AA, Linos E. Indoor tanning and non-melanoma skin cancer: systematic review and meta-analysis. *BMJ.* 2012;345:e5909.
4. Committee on Medical Aspects of Radiation in the Environment. COMARE's 13th report: The health effects and risks arising from exposure to ultraviolet radiation from artificial tanning devices; 2009. URL: <https://assets.publishing.service.gov.uk/media/5a7dfe7fed915d74e33ef5bc/COMARE13thReport.pdf>
5. Gandini S, Dore JF, Autier P, Greinert R, Boniol M. Epidemiological evidence of carcinogenicity of sunbed use and of efficacy of preventive measures. *J Eur Acad Dermatol Venereol.* 2019;33 Suppl 2:57-62.
6. Wehner MR, Chren MM, Nameth D, Choudhry A, Gaskins M, Nead KT, et al. International prevalence of indoor tanning: a systematic review and meta-analysis. *JAMA Dermatol.* 2014;150(4):390-400.

7. Cancer Research UK. Melanoma skin cancer statistics. 2015. URL: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/melanoma-skin-cancer>
8. World Health Organization. Artificial tanning devices: public health interventions to manage sunbeds. 2017. URL: <https://www.who.int/publications/i/item/9789241512596>
9. Melanoma Focus. 28% of UK adults are using sunbeds as skin cancer rates rise. 2024. URL: <https://melanomafocus.org/news-blog/28-of-uk-adults-are-using-sunbeds-as-skin-cancer-rates-rise/>
10. Schneider S, Kramer H. Who uses sunbeds? A systematic literature review of risk groups in developed countries. *J Eur Acad Dermatol Venereol*. 2010;24(6):639-48.
11. Public Health Information & Research Branch Information Analysis Directorate, Belfast. Health Survey (NI): First Results 2021/22. 2022. URL: <https://www.health-ni.gov.uk/publications/health-survey-northern-ireland-first-results-202122>
12. Scottish Government. Public attitudes to cost of living and other topics: tracker - data tables. 2024. URL: <https://www.gov.scot/publications/public-attitudes-to-cost-of-living-and-other-topics-tracker-data-tables/>
13. Welsh Government. Survey of sunbed use in Wales: Summary briefing.; 2017. URL: <https://gov.wales/sites/default/files/statistics-and-research/2019-07/170927-survey-sunbed-use-summary-briefing-en.pdf>
14. Cust AE, Armstrong BK, Goumas C, Jenkins MA, Schmid H, Hopper JL, et al. Sunbed use during adolescence and early adulthood is associated with increased risk of early-onset melanoma. *Int J Cancer*. 2011;128(10):2425-35.
15. Diehl K, Gorig T, Breitbart EW, Greinert R, Hillhouse JJ, Stapleton JL, et al. First evaluation of the Behavioral Addiction Indoor Tanning Screener (BAITS) in a nationwide representative sample. *Br J Dermatol*. 2018;178(1):176-82.
16. LaMonte OC, Feldman SR. Indoor Tanning Addiction: Biological Mechanisms and Association with Other Disorders. *J Cutan Med Surg*. 2025;29(3):282-9.
17. Petit A, Lejoyeux M, Reynaud M, Karila L. Excessive indoor tanning as a behavioral addiction: a literature review. *Curr Pharm Des*. 2014;20(25):4070-5.
18. Woo DK, Eide MJ. Tanning beds, skin cancer, and vitamin D: An examination of the scientific evidence and public health implications. *Dermatol Ther*. 2010;23(1):61-71.
19. European Commission. Opinion on Biological effects of ultraviolet radiation relevant to health with particular reference to sunbeds for cosmetic purposes. 2016.
20. All Party Parliamentary Group on Skin. Inquiry into sunbed regulation in England: Consultation Summary and final recommendations to the Department of Health. URL: <https://www.appgs.co.uk/>
21. Dobbins S, Wakefield M, Sambell N. Access to commercial indoor tanning facilities by adults with highly sensitive skin and by under-age youth: compliance tests at solarium centres in Melbourne, Australia. *Eur J Cancer Prev*. 2006;15(5):424-30.
22. Gavin A, Donnelly C, Devlin A, Devereux C, O'Callaghan G, McElwee G, et al. Public at risk: a survey of sunbed parlour operating practices in Northern Ireland. *Br J Dermatol*. 2010;162(3):627-32.
23. Northern Ireland. Dept. of Health, Social Services, and Public Safety. Regulation of the sunbed industry in Northern Ireland: A public consultation. 2009.
24. Eden M, Hainsworth R, Gordon LG, Epton T, Lorigan P, Rhodes LE, et al. Cost-effectiveness of a policy-based intervention to reduce melanoma and other skin cancers associated with indoor tanning. *Br J Dermatol*. 2022;187(1):105-14.
25. Guy GP, Jr., Machlin SR, Ekwueme DU, Yabroff KR. Prevalence and costs of skin cancer treatment in the U.S., 2002-2006 and 2007-2011. *Am J Prev Med*. 2015;48(2):183-7.

26. Gordon LG, Hainsworth R, Eden M, Epton T, Lorigan P, Grant M, et al. Sunbed Use among 11- to 17-Year-Olds and Estimated Number of Commercial Sunbeds in England with Implications for a 'Buy-Back' Scheme. *Children (Basel)*. 2021;8(5).
27. Sinclair CA, Makin JK, Tang A, Brozek I, Rock V. The role of public health advocacy in achieving an outright ban on commercial tanning beds in Australia. *Am J Public Health*. 2014;104(2):e7-9.
28. Cancer Research UK. Public want ban on sunbeds for under 18s. 2009. URL: <https://news.cancerresearchuk.org/2009/07/16/public-want-ban-on-sunbeds-for-under-18s/>
29. British Skin Foundation. 77% of dermatologists agree sunbeds should be banned in the UK. 2019. URL: <https://www.britishskinfoundation.org.uk/news/77-of-dermatologists-agree-sunbeds-should-be-banned-in-the-uk>.