Sun Safety in Queensland 2011

Population Epidemiology Unit
Division of the Chief Health Officer, Queensland Health.

Health risks from unsafe sun exposure

Skin cancer, unlike many other cancers, is largely preventable if appropriate sun safety measures are taken. Excessive exposure to ultraviolet radiation causes sunburn and puts people at higher risk of premature ageing, eye damage and skin cancer. Queensland has the highest rates of melanoma, basal cell carcinoma and squamous cell carcinoma in the world. There were 2,668 new cases of melanoma and 285 deaths in Queensland in 2007 and it was estimated that approximately 87,000 non-melanoma skin cancer cases were diagnosed in 2008. Further details, including trend data, can be found in The Health of Queenslanders 2010. Third report of the Chief Health Officer Queensland.

Protect Yourself in Five Ways

Ultraviolet radiation from the sun is measured using the Ultraviolet Index. Queensland has high ultraviolet radiation levels all year round, even in winter. Once the Ultraviolet Index reaches three or above, sun protection is required. The recommended best practice behaviours to reduce unsafe sun exposure are seeking shade, wearing a broad brimmed hat, clothing that covers the majority of the body, wrap-around sunglasses, and using SPF30+ sunscreen. Sustained practice of these sun safe behaviours reduces exposure to ultraviolet radiation that is the cause of more than 95% of all skin cancers. This sun safe behaviour is especially important in the first 20 to 30 years of life as the majority of skin damage occurs during this period and increases the risk of developing skin cancer later in life.

How to interpret the Ultraviolet Index

<table>
<thead>
<tr>
<th>No.</th>
<th>Level</th>
<th>Protection required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Low</td>
<td>No protection required</td>
</tr>
<tr>
<td>3-7</td>
<td>Moderate</td>
<td>Protect yourself in 5 ways</td>
</tr>
<tr>
<td>8-10</td>
<td>Very high</td>
<td>If possible, avoid being outside or seek shade. Be vigilant with protection if in the sun.</td>
</tr>
<tr>
<td>11+</td>
<td>Extreme</td>
<td></td>
</tr>
</tbody>
</table>

While almost all adult Queenslanders practise at least one of the five best practice sun safe behaviours (96.3% in summer and 80.6% in winter in 2011), less than 10% practise all five. Queenslanders were more vigilant in summer than in winter: in summer 6.7% reported protecting themselves in five ways, whereas in winter 3.5% did so. Many Queenslanders practised only three best practice sun protection behaviours: 52.0% in summer and 32.1% in winter, with no difference between males and females in either season. The individual behaviours varied with the season with most seeking shade in summer (86.2%) but fewer in winter (45.5%). Similarly, more used sunscreen in summer (56.3%) than in winter (30.2%). Sun protection behaviours in regional Queensland including local government areas and health service districts are published on the Queensland Health website.

The Toward Q2 target is to cut by one-third unsafe sun exposure by 2020. In the baseline year (2006) 15% of adult Queenslanders reported being sunburnt on the previous weekend and 4.8% were sunburnt in 2011. This indicator is particularly sensitive to weather conditions and seasonal patterns. An additional indicator is the prevalence of sunburn in the previous 12 months – this was 52.4% of adults in 2011. The proportion of adult Queenslanders who practise three or more sun protection behaviours in summer is a complementary Toward Q2 indicator, with a goal to increase the proportion of adult Queenslanders who are sun safe. In 2011, 52.0% reported practising three or more sun protection behaviours in summer.

The Queensland Government, in collaboration with key stakeholders, has adopted a range of educational strategies to prevent skin cancer, particularly in children, young adults and outdoor workers. These include online interactive games designed in collaboration with the Department of Education and Cancer Council Queensland to educate school students about sun safety. Other areas of work focus on policy and resource development, implementation and evaluation as well as supportive environments and applied research in key settings such as outdoor workplaces, schools and sporting organisations.
Sun safety in Queenslanders

At a glance

- People who practise sun protection all year round are 20% less likely to report sunburn than those who do not take precautions.
- Males are at greater risk of getting sunburnt than females.
- Young people are more likely than older people to get sunburnt and less likely to protect themselves all year round.
- Light or fair skinned people are more likely to report sunburn than those with medium or dark skin, although they are also more likely to protect themselves from the sun all year round.

<table>
<thead>
<tr>
<th>Risk group</th>
<th>Sunburn</th>
<th>Sun protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Males were 40% more likely to report sunburn than females and twice as likely to report severe sunburn (with blistering). Young males are about 7 times more likely to report sunburn than older males (and about 3 times as likely to report severe sunburn).</td>
<td>Males do not differ from females in all year round sun protection.</td>
</tr>
<tr>
<td>Young people (16–24 years)</td>
<td>Young people (16–24 years) are about 7 times more likely to report sunburn than older people (45+ years) and twice as likely to report severe sunburn as older people. Within the age group 16–24 years, the prevalence of sunburn decreases with age.</td>
<td>Young people (16–24 years) are 40% less likely to report protecting themselves from the sun all year round than older people (45+ years). Within the age group 16–24 years, the prevalence of sun protection all year round increases with age.</td>
</tr>
<tr>
<td>Light or fair skinned people</td>
<td>Adults with light coloured skin are 20% more likely to report sunburn than those with dark and medium coloured skin, irrespective of sex or remoteness. Young people with light skin are 60% more likely to report sunburn than darker skinned young people.</td>
<td>People with light skin are 50% more likely to report sun protection all year round than those with dark and medium coloured skin, irrespective of age, sex and remoteness.</td>
</tr>
<tr>
<td>People living in regional and remote areas</td>
<td>People living in regional areas are 30% more likely to report sunburn than those in major cities. Males in remote areas are 80% more likely to report severe sunburn than males in major cities.</td>
<td>People in remote areas are twice as likely as those in major cities to protect themselves from the sun all year round. Young people living in remote areas are 4 times more likely to practise sun protection all year round than young people in major cities.</td>
</tr>
</tbody>
</table>

How much sun exposure is enough to maintain adequate vitamin D levels?

Vitamin D is important for calcium regulation and is largely obtained from skin exposure to sunlight, although some is also obtained through diet or supplements. People who infrequently get direct sunlight on their skin, such as those who are house-bound or elderly, are at risk of vitamin D deficiency. However, it is risky to go out in the sun unprotected with the intention of getting a dose of vitamin D. In Queensland for most of the year the amount of time the average person can expose their skin to direct sunlight before skin damage occurs is extremely short. It is this delicate balance between beneficial exposure that produces vitamin D and exposure that induces skin damage that makes vitamin D and sun exposure a controversial and problematic issue.

Queensland Health acknowledges that this issue is complex and will closely monitor developments in this area.

References