

The intensity of solar ultraviolet radiation is expressed in terms of **UV index**. This index is internationally adopted in order to communicate to the public information regarding the possible risk from excessive exposure to the sun radiation.

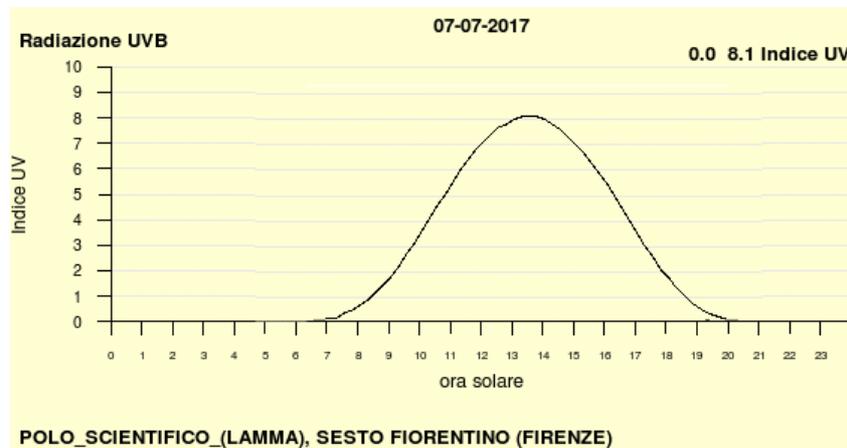
The UV Index is closely related to the elevation of the sun on the horizon (as well as to other factors such as stratospheric ozone, altitude, cloudiness, etc.) and therefore in Italy it reaches the highest values in the central hours of days in summer period during clear sky. The forecast here presented is elaborated by the DWD (Deutscher Wetterdienst, Germany). Two types of forecast are presented, one for clear sky and one taking into account the forecasted cloudiness. The forecast is represented both in the form of maps indicating the UV Index value expected at different times of day and in the form of a table showing the maximum daily UV Index value at specific locations. It is suggested to pay particular attention to the use of the second type of forecast because if the cloudiness forecast is wrong also the UV Index forecast could be wrong; in a mostly cloudy or overcast day it is possible to record UV Index close to the one expected for clear sky if the clouds are not present even for a short time. In addition, only thick clouds that obscure the sun significantly reduce UV radiation to the ground. The predicted values, even for clear skies, could however be lower than those actually recorded locally due to particular environmental conditions (elevation, highly reflective surfaces such as snow, sand, etc.). The UV Index at our latitudes can take values from 0 to 12, increasing index values express increasing risks deriving from solar exposure. Attention, even on days with a pleasant temperature, the UV radiation can be very intense.

The table below shows the general precautions to be taken (according to the maximum daily expected UV index) recommended by the World Health Organization (WHO) ([http://www.who.int/uv/intersunprogramme/activities/uv\\_index/en/](http://www.who.int/uv/intersunprogramme/activities/uv_index/en/)):

UV INDEX		
>11	Extreme	avoid staying outdoors in the central hours of the day (from 11 to 16, daylight saving time) and in any case stay in the shade, it is still necessary to use sunglasses, hat, t-shirt and sunscreens with high protection.
8-10	Very High	
6-7	High	stay in the shade in the central hours of the day (from 11 to 16, summer time), it is still highly recommended to use sunglasses, hat, t-shirt and sunscreens with high protection. Particular attention in case of very reflecting surfaces (snow, light sand, etc.).
3-5	Moderate	
1-2	Low	generally no protection is required unless of particular sensitivity to UV radiation. We recommend the use of sunglasses especially on highly reflective surfaces (snow, sand, etc.).

At the following link are the precautions recommended by the Istituto Superiore di Sanità of Italy <http://www.epicentro.iss.it/problemi/uv/uv.asp>.

In the figure the trend of the UV Index on a clear day of July in Florence (UV Index real time in Florence <http://www.lamma.rete.toscana.it/meteo/osservazioni-e-dati/dati-stazioni>). Notice how in the period from 10 to 17 (daylight saving time) there are values higher than 3 and therefore requiring precautions during sun exposure.



Notwithstanding the general indications, however it should be considered that not all the skin are equally sensitive to ultraviolet radiation. In this regard, 6 phototypes were identified based on their sensitivity:

Phototype	si abbronzia	si scotta	colore capelli	colore occhi
I	never	always	red	blue
II	sometimes	sometimes	blond	blue/green
III	always	rarely	brown	gray/brown
IV	always	almost never	black	brown/black
V-VI	always	never	black	black

The phototypes I and II are the most sensitive, on the contrary the V and VI the less sensitive. Remember that in any case for UV Index above 3 it is always advisable to adopt the precautions in the WHO table.