

Light and kindness on earth !

At this time of year, light assumes a particular significance in our lives, coinciding with the winter solstice. This period is characterised by the shortest days and longest nights, a phenomenon attributable to the tilt of the Earth's axis of rotation around the sun. At the end of December (on the 21st or 22nd to be precise), the northern hemisphere is at its furthest from the sun, resulting in a reduction in the amount of sunlight received.

As paediatricians, we all know the importance of light. It is a source of energy, a natural regulator and a fundamental element in the health, growth and development of living beings. Through photosynthesis, plants, algae and some bacteria use light to produce energy in the form of glucose, releasing oxygen in the process. This energy then feeds the herbivores and carnivores in the food chain. Increasingly widespread technological tools, such as photovoltaic panels, now make it possible to convert sunlight into electricity, which can then be modulated and distributed to support human activities. Light plays also a key role in regulating circadian rhythms, which influences sleep, wakefulness, digestion and many other physiological functions. Natural light promotes a gentle awakening while darkness prepares your body for rest. Many organisms depend on light to trigger growth or reproduction. The most illustrative examples are plants that flower only when the days are longer and some animals that hibernate to slow down their metabolism during winter. Light is essential for well-being and health. Notably, light serves in necessary to activate vitamin D, which is essential for the proper functioning of our bodies. It contributes to our mental and psychological development, as demonstrated by seasonal depression, which is more common in winter, and the benefits of light therapy.

Light also reminds us of the importance of balance and nuance. Light can present risks when used incorrectly or in excess. In contemporary societies, adults, young people and children alike are subject to the harmful effects of blue light, emitted by phone, computer and tablet screens. These devices have become an integral part of our daily, evening and night-time routines, and their use has been linked to a number of health concerns. These include eye strain, headaches, and disturbances in the production of melatonin that regulates sleep. Additionally, there is a growing concern over digital dependency and the stress that arises from the inability to disengage from devices and obtain sufficient rest. Excessive and repeated exposure to sunlight, particularly UV rays, causes skin irritation. In the longer term, this can lead to accelerated ageing of the skin, eye diseases such as cataracts, and an increased risk of skin cancer. Disproportionate artificial lighting in urban areas has also been shown to disrupt natural ecosystems. This has been observed with migratory birds and certain marine species such as sea turtles being disoriented by urban lights. Similarly, insects and plants experience disruption to their life and growth cycles when exposed to abnormal light level or timing.

Beyond these astronomical and biological considerations, light also has a symbolic dimension. Over the last few weeks, we have seen all kinds of lighting appear to guide and brighten up our long nights. These illuminations transform facades and buildings into magical canvases. Trees are adorned with little stars that glow in the dark. These lights narrate a collective story, the quest of humanity for warmth and sharing. These lights bring people together in squares, Christmas markets and homes. They warm the atmosphere, reminding us that even in the darkest of times, there is always a way forward.

In this spirit, the editorial board of *The Belgian Journal of Paediatrics* wishes you a Holiday season filled with radiance, sparkle and light. Through this editorial text and the cover drawing by our cartoonist Serge Ernst, we also hope that in 2025, each of us will be able to embody a little sources of light in our own way. In our families, in our teams or with our patients, may we incarnate these little fireflies, the squirrel with the headlamp, the blackbird with the candle or the lizard with the star. May we bring these little lights that comfort or reassure, may we be these invitations to hope or gratitude, may we turn our gaze with confidence on new horizons.

With all our affection and enthusiasm,

Christophe Chantrain and Marc Raes, Editors-in-chief

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BELGISCHE VERENIGING
VOOR KINDERGENEESKUNDE
SOCIÉTÉ BELGE DE PÉDIATRIE

**Comité de rédaction - Redactieraad
M. Raes - C. Chantrain**

Gasthuisberg - Kindergeneeskunde

Herestraat 49 - 3000 Leuven

E-mail BJ-Ped@hotmail.com