

able action on the evolution of infantile paralysis. By this means we have often succeeded in restoring to the muscles affected by the disease a part of their motile and contracting power. I have also obtained unlooked-for improvement in several cases of Little's disease. Lastly, anæmia of all kinds, general debility, convalescence after serious illnesses or operations are suitable cases for heliotherapy. And this may easily be understood after what we have seen of its general effects. It follows that heliotherapy should be practised in all children's hospitals where, as Joubert writes, "the sun-cure balcony will become in the surgical services of to-morrow as capital a necessity as the laboratory or the radiological service."

It is scarcely needful to add that heliotherapy can be practised anywhere where the sun shines, and that countries with privileged climates need not be the only ones to benefit. Sir Henry Gauvain will tell us presently of the excellent results which he has obtained in England in his children's hospitals which we have had the pleasure of visiting and where artificial light is associated with heliotherapy or supplements it. It is certain that if the sun, acting by the totality of its synthesised powers in white light and not by virtue of this or that isolated radiation, is and always will be far the best mode of treatment, we must none the less encourage, when the sun is wanting, the use of artificial light, in combination with the air-cure. But it will always be advisable to use lamps whose rays most closely resemble the admirable distribution of the solar spectrum. It is for this reason that carbon lamps are more rational than mercury vapour lamps.

I should like to point out, at the end of this section, the constantly increasing role which heliotherapy is playing to-day as a method of healing. It is not, of course, possible for me to describe the highly satisfactory progress realised everywhere in this domain. But, since we are in Geneva, I may be allowed to refer here to the remarkable work of Dr. Martin du Pan at the Children's Hospital, and the interesting results he has obtained with the aid of natural and artificial sunlight cure.

#### Predisposed Children.

If heliotherapy applied to children can cure disease as serious as tuberculoiss and rickets, it would seem that it ought also to be able to prevent their development. Experience corroborates this hypothesis; it shows that judicious application of sunlight is the most powerful of prophylactic agents.

According to present notions, it is admitted that tubercular infection occurs during the period of infancy. On arriving at puberty all, or nearly all, children (about 95 per cent.) have paid tribute to tuberculosis. We know that infection is propagated by the pulmonary or intestinal channels. In the first case the lymphatic system, and particularly the tracheo-bronchial ganglions, constitute the first defence which the organism opposes to the invasion. If the latter is well-prepared the primary infection remains thus initially localised; it acts as a sort of immunisation, conferring security on the child for the future. As the germ of tuberculosis is contracted during infancy, it is now that endeavours must be made to counteract the disease to prevent its later development. For this purpose

it is sufficient to strengthen the child's own powers of resistance to the utmost.

There is no more active or more certain means of obtaining this result than by placing the child in immediate contact with pure air and sunshine.

I have endeavoured to carry out preventive sunlight treatment at Cergnat, in the Ormonts Valley, the first high altitude preventorium, which was opened in 1910, and is intended primarily for children suffering from tracheo-bronchial adenopathy. This slight attempt at an open-air school showed the benefit which delicate and predisposed children taught in the fresh air and sunshine might expect. After a few weeks, sickly children with narrow, hollow chests, weakened limbs and atrophied muscles, are wonderfully changed. Their skin is bronzed, a rosy complexion replaces the previous anæmic pallor, the improvement in general health is marked. The percentage of hæmoglobin has increased, the muscles are firm, breathing is longer and deeper, while X-ray examination indicates progressive healing of the tracheo-bronchial ganglions; the intellect brightens, keeping pace with the development

of the body, "joie de vivre" is visible on the sun-burned faces, and the spirit soars.

This beneficial influence of the sun on the morale of children is striking, not only in the predisposed and convalescent, but also among those who are ill. Under the influence of the air and sun-bath we witness a new lease of vital strength, of complete intellectual equilibrium, turning despondent creatures into lovers of all living things. The contrast is particularly striking in children unable to move, who might properly be discouraged and sullen; on the balconies, as soon as the sun shines, laughter and singing are heard, bright looks and smiling faces are seen, as though these little bronzed bodies had sunshine in their souls.

(To be concluded.)



THE SAME PATIENT—COMPLETE CURE.  
With full correction of kyphosis after one and a half years.  
(Without the use of plaster jacket.)

[previous page](#)

[next page](#)