

phalanx is indicated. Movements and toe stretching should be started early after operation.

Hallux Rigidus.

Hallux Rigidus is a condition closely allied to the last. In Hallux Rigidus the metatarso-phalangeal joint is stuck in slight plantar flexion, while the distal phalanx tends to dorsiflex to compensate.

This condition is very painful and usually occurs in men, and is accompanied by osteoarthritis and tender exostoses at the head of the first metatarsal.

Treatment.

Try first removal of any septic focus, then a metatarsal bar on the shoe. If this fails operative treatment is indicated, preferably removal of the base of the phalanx.

In children stiffness of the metatarso-phalangeal joint occurs, and is probably infective in origin, due to spasm, and wears off with rest.

Hammer Toe.

A hyperextension of the metatarso-phalangeal joint and hyperflexion at the proximal interphalangeal joint and extension at the distal interphalangeal joint. The condition may occur in the distal interphalangeal joint, causing Mallet Toe. Usually a corn develops at the knuckle thus formed.

Cause. Rarely this condition is congenital; usually it is due to bad foot wear.

Treatment.

Never have a hammer toe amputated. It is one thing that an orthopaedic surgeon can guarantee to cure in 100 per cent. cases. Palliative treatment is useless. The operation is a simple and effective one, and consists in making a spike of the proximal phalanx and a hole in the distal phalanx and sticking one into the other. The patient may usually get back to work in a fortnight.

There is just one more point which I have deliberately not stressed until the end, not because it is trivial, but because I consider it so very important that I mention it now, in the hope that in your minds the LAST shall be for ever first. I allude to that hospital routine which forces nurses to stand about on their feet doing over-heavy work for overlong hours and which, as we have seen, may be the cause of a large proportion of foot troubles.

Undoubtedly, the hours to-day are shorter than some years ago, but there is still much room for improvement, and when a nurse complains of her feet troubling her this is the first item that should be considered by the hospital authorities; especially in the case of Junior Probationers, coming, as they do, from the comparative idleness of home life to the long hours of a teaching hospital. It would save hospitals trouble and expense, and nurses much suffering if in such cases the hours of standing were reduced, either by an increase in the off-duty hours, or at least by a change of duty—say, from theatre to night duty. This should be done in every case of early foot strain, and at the same time the appropriate treatment carried out in the massage department.

So, in conclusion, I think if this last suggestion were acted upon and at the same time you refrained from wearing the latest fashion in crazy footwear, much would be done towards alleviating or even preventing the sufferings of those ill-used appendages, your feet.

References:—Bankart, "Manipulative Surgery."
Lake, "The Foot."

DETACHMENT OF THE RETINA.

The valuable lecture on "Detachment of the Retina," by Dr. E. F. King with Lantern Slides, delivered at the British College of Nurses on April 27th, will by his kind consent be published in this Journal next month.

SLEEP AND REST.

By PROF. RAGNAR GRANIT.

(Extracts from an article published in the Bulletin of the Finnish Red Cross.)

Sleep is not a condition which affects the whole body, though the body is rested during sleep. Birds, for example, sleep in a standing position and consequently tire the muscles of their legs. The digestive system continues its work. The slowing down of cardiac and respiratory activity during sleep seems to be due to the fact that most of the muscles are resting. In any event, while we are asleep, the brain and its nerve centres are slumbering too.

To produce a reaction in a sleeping person, therefore, requires more energetic means than usual—the ringing of an alarm clock, for example, or a violent shaking. It has been demonstrated that the most active parts of the brain are those which sleep the soundest. In the case of a left-handed person, the movements are controlled by the right half of the brain, and *vice versa*, so that, when tickled under the nose during sleep, the left-handed man will raise his right arm in defence and the right-handed man his left.

It is common knowledge that a mother is immediately awakened by the wailing of her child, and a ship's mechanic by any irregularity in the rhythm of the engines. The sensitiveness to certain sounds which a person has while awake does not relax even during sleep. The sleeper's interest is concentrated like that of the passenger on board ship who, absorbed in a cinema film, is oblivious to the sound of the siren and therefore unaware that the vessel has been battling with fog.

The sleep of a normal adult is "single-phased," that is to say, it becomes most profound after the first hour and lighter towards the morning. In the case of nervous subjects, overworked or neurasthenic, sleep comprises successive phases of increasing and decreasing profoundness. This is also true of persons who are most active at night; they retire late and sleep fitfully, so that they are often out of sorts in the morning and feel ready for work only towards the evening.

The measure of repose enjoyed during slumber is determined by fixing the bed in such a manner that it rises or falls in accordance with the movements of the sleeper during the night. These movements are registered on a rotating cylinder. The amount of repose produced by sleep depends on both the depth and duration of slumber. Napoleon slept profoundly, but for very short periods of time. Most people attain the same result by sleeping less profoundly but longer.

The earliest reliable experiments on the mechanism of sleep revealed the presence of "fatigue toxins" in the blood. The Italian physiologist, Mosso, demonstrated this fact by means of an apparatus, known as the ergograph, which registers the volume and rhythm of movements. Since brain work diminishes the capacity for muscular work, it was assumed that "fatigue toxins" circulate in the blood. New experiments have given even more formal results. If the blood of a tired dog is injected into the arteries of a rested dog, the latter falls asleep. It is clear from this, that the blood contains some substance conducive to sleep.

It would, however, be unwise to conclude that this is the whole explanation, for other facts have been observed which complicate the problem. Strümpell, the well-known German physician, tells of a patient who successively lost all sensitiveness of the skin, muscles and sensory organs with the exception of the right ear and left eye. When these organs are bound up the patient falls asleep but awakens as soon as the light falls on his left eye. Other similar cases have been observed since, and they go to

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