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THE ORTHOPEDIC TREATMENT OF DEFORMITIES AND DISABILITIES RESULTING FROM PARALYSIS.*

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Every joint should be able to maintain easily a condition of balance. If at the knee the quadriceps extensor be paretic or completely paralyzed, while the hamstring muscles still retain their contractile power, the knee will soon assume a condition of permanent flexion. It will be impossible to extend the leg so that it may functionate properly in supporting the body weight.

Another condition at the knee, which is not seen nearly so frequently, is that of hyperextension when the hamstring muscles are greatly disabled through paralysis, and the extensor muscles still retain a fair proportion of their normal strength. This is shown well in Fig. 1, where the knee is hyperextended through paralysis of the flexors.

If in the ankle the anterior group of muscles be paretic, while their antagonists retain their normal power, a condition of equinus will result (Fig. 2), the heel being drawn upward, while the anterior portion of the foot drops downward so as to interfere with the normal movement. In a similar way, if the peronei muscles be disabled, the internal group, namely, the tibiales and the long extensors, will draw the foot inward so as to bring about a condition of varus and supination. This is shown in Fig. 3, left foot.

*Read at the Meeting of the Toronto Medical Society, November 21, 1904.