

Management of Weakness

New or increased muscle weakness in PPS is caused by overwork, disuse or a combination of both of these factors. It is essential that the underlying cause of muscle weakness is determined so that appropriate management strategies can be developed. The management of new weakness may include:

- Strengthening exercise (isometric, isotonic, isokinetic);
- Aerobic exercise;
- Stretching exercises to decrease or prevent contractures;
- Education regarding energy conservation techniques including pacing, rest, activity reduction and the avoidance of muscular overuse;
- Weight loss; and
- Prescription of orthoses and assistive devices.

If muscle weakness is secondary to disuse, low intensity non-fatiguing strengthening exercise or low-intensity aerobic exercise may be of benefit. Details regarding the use of exercise for post-polio individuals is outlined in the following section on exercise.

In several studies, muscular overuse in subjects with a history of paralytic polio has been thought to be the cause of increased weakness. If weakness is secondary to chronic overwork and fatigue, muscles require rest, and further overuse of muscle must be avoided. Patients should be encouraged to rest and pace activities (refer to following section on lifestyle modification). Orthoses may also be used to assist in resting isolated, weakened muscles (refer to following section on orthoses and mobility aids). Strenuous activities producing a decline in muscle strength should be avoided. However, muscles that have been affected by polio readily atrophy with disuse. It is, therefore, essential that strength changes are monitored closely following the prescription of rest, reduced activity and orthoses.