

Postural Abnormalities

Postural deformity can lead to pain and decreased energy efficiency during various activities. Common postural malalignments found in the post-polio population include:

- Scoliosis;
- Upper thoracic kyphosis and forward head posture with compensatory lumbar hyperlordosis;
- Genu valgus and recurvatum;
- Pelvic obliquity;
- Uneven weight distribution between the limbs and through the soles of the feet; and
- Calcaneal valgus or varus.

Although many post-polio individuals may have been functioning adequately over the years with fixed deformities, the deformities can often progress and contribute to the musculoskeletal symptoms

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they now experience. There are a number of reasons why this occurs. Tension in the muscles reduces tissue vascularity, leading to microdegeneration. Chronic strain causes polymer lengthening of collagen fibres.⁹³ Repeated tension results in longer fibres with increased collagen turnover and susceptibility for muscle fibres to rupture or increased curvature of an already deformed joint. Early ageing of these collagen tissues, which become stiffer and less flexible owing to extra wear and tear, along with joint cartilage degeneration, further contributes to the manifestation of musculoskeletal difficulties in these patients.⁶