

## **Foldable Motorized Walker for Stability and Balancing**

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The number of older adults in Malaysia is gradually increasing as the population ages. These older people, particularly those suffering from disease-related mobility issues, find it increasingly difficult to walk as their physical abilities deteriorate. For children and teens who need help walking, walkers are designed especially for the needs and bodies of younger users. A walker, also known as a walking frame, is a device that helps disabled people maintain balance and stability while walking. Whether a child needs short-term assistance after an injury or illness or due to a long-term disability or medical condition, walkers are an excellent solution for safe and comfortable mobility. Older adults are often prescribed walking aids to encourage balance and mobility. Most walkers on the market can only be folded only once, causing huge sizes, so these walkers are not convenient for carrying, transportation and storage. This project aims to design a foldable rollator walker into a virtually flat configuration for effective mobility-aid devices. Then, it is used to assess stability and balancing walking aid users based on the biomechanics principle. This foldable walker is a mobility-aid device that can be folded easily for transportation and reduce the user's physical power when lifting it. The combination of the walker and the motorized system would help users walk faster while using a walker. That way, this walker enables users to walk faster with less exhaustion. This walker also can be folded easily, and it reduces the physical power when the users lift it.

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