

White cane

Long cane painted white or coated with reflective white tape. It has a lightweight shaft (collapsible or straight), usually constructed from aluminum, graphite, carbon fiber or fiberglass, approximately one half inch in diameter with a rubber, plastic, leather or wood hand grip at one end and a nylon, plastic or metal tip at the other (which can be pointed, or rounded with the shape of a cylinder or roller tip). The collapsible canes are commonly known as folding or telescopic canes.

Possible configuration variants include the guide cane (a shorter cane that extends from floor to a user's waist, helping in scanning for kerbs or steps; it can also be used diagonally across the body for protection as it warns the user of obstacles), the identification cane (lighter and shorter cane used to alert others that a user is visually impaired but not to the extent where they require a long cane or other variant), the support cane (offering stability to user, however with very limited potential as an orientation device), the kiddie cane (same as the long cane, but designed to be used by children; it is smaller and lighter) and the green cane (used in some countries by users with low vision). The grip of the cane may be straight or curved, and it may also have a short rope loop for better grip. The tip of the cane can be replaced also.

- **Product Classification**
 - APL (WHO Assistive Product Priority List): 50 (White canes)
 - ISO 9999:2022: 120803 (Guide canes)
- **Possible configuration variants**
 - Hard tip (suitable for rough pavements, for tapping the ground unlike rolling on it).
 - Rolling tip (suitable for smooth pavements: it never leaves the ground and offers maximum protection to users).
- **Possible accessories or optional components**
 - Bag (in which the cane can be put after folding it; it saves the cane from getting dirty when not in use).
 - Wrist lace (for better grip).
- **Product goals**

Activities or functions the product is mainly intended to support, according to WHO ICF Classification:

 - Perceiving [\[b156\]](#).
 - Moving around in different locations [\[d460\]](#).
 - Walking [\[d450\]](#).
- **Indicated impairments**

Difficulties the product is mainly intended to address, according to the WHO ICF Classification:

 - Seeing [\[b210\]](#) (blindness, or severe low vision, or severe constriction of peripheral vision, or deaf blindness).
- **Contraindicated impairments**

Difficulties for which the product may be inappropriate:

 - Difficulty in fine hand use.
- **Indicated environments**

Specific environments in which the product should be used:

 - Smooth pavements. *Only if used with variants: Rolling tip*
 - Rough pavements. *Only if used with variants: Hard tip*
- **Contraindicated environments**

Environments in which the product may be inappropriate:

- In the snow.
- Uneven ground. *Unless used with variants: Hard tip*

- **Other indicated factors**

Other factors or situations the product is intended to address:

- Detecting obstacles and steps while walking or moving around.
- Echolocation.
- Orientation and way-finding (by finding, verifying and discriminating landmarks; it helps establish the line of direction of travel and also helps the blind traveler relax when walking with an inexperienced sighted guide; it takes the focus off the feet when crossing a street; it grounds a blind person in space).
- Vision substitution (by replacing optical perceptual flow with tactile perceptual flow).
- Deafblindness.

- **Other contraindicated factors**

Other factors or situations in which the product may be inappropriate:

- Use while moving on a wheelchair which needs to be propelled with both hands.
- Use while walking with crutches with both hands.

- **Points to be considered in product selection**

- A white cane is inexpensive, handy and has adjustable length.
- Each cane should be individually prescribed for a user's height, length of stride and comfort; the length traditionally extends from the floor to the user's sternum.
- For a user who has limited or reduced dexterity, it is better to use a cane that is light in weight.
- The white cane techniques are simple and universal and can be applied even in a relatively unknown environment.
- It enables the vision-impaired person to seek a variety of jobs and expedites their economic rehabilitation.
- The collapsible white cane can be folded and put in a handbag while travelling in public transport or while at work
- Choose the shape of the tip (pointed or rolling) depending on the user's mobility habits.

- **Points to be considered in product fitting**

- In order to ensure effective use of the white cane, the user should undertake an individual training program by a trained mobility instructor.
- The areas of instruction for orientation and mobility with white cane include: 1) Environmental concepts 2) Gross and fine motor skills related to independent travel 3) Sensory awareness, stimulation, and training 4) Spatial concepts 5) Sighted guide/ human guide procedures 6) Basic protective and information gathering techniques 7) Orientation skills 8) Cane skills (the length of the cane should be adjusted according to the walking speed of a user) 9) Urban, suburban, and rural travel 10) Travel in business districts 11) Procedures for crossing streets including how to deal with traffic control signals 12) Use of public transportation systems 13) Procedures for travel and independent functioning in places of public accommodation 14) Daily living skills 15) Sensory/motor skills in coordination with the physical or occupational therapist and teacher of visually impaired (TVI) 16) Skills for independent living.

- **Points to be considered in product use**

- The basic technique for cane travel, the "touch technique," requires the cane user to move the tip of the cane in an arc across the front of his body, thus assuring a safe space for the next footstep.
- When moving in crowded places, users can decrease the length of the cane by adjusting the shaft length and grip position.

- **Points to be considered in product maintenance / follow-up**

- The tips of the canes may get worn over time. They must be replaced promptly avoid any accidents.
- In folding/collapsible canes, the joints could get unstable or lose over time; the elastics that hold the joints, must be replaced to ensure the joints keep functioning effectively.

- **Examples of products available on the market**

- Live product search in the EASTIN website <https://www.eastin.eu/en/searches/products/list?iso=120803>

Source

This Fact Sheet was compiled in 2021 by an international team of experts, to provide the initial knowledge base for a project ("An online system to assist the selection of assistive product") supported by the World Health Organization in 2020-2021 within the GATE Initiative (Global collaboration on Assistive Product). Fact Sheets were compiled for each of the 50 types of products included in the WHO APL (Assistive Product Priority List).

The team was composed of Renzo Andrich (Italy, group leader), Natasha Layton (Australia), Stefan von Prondzinski (Italy), Jerry Weisman (USA), Silvana Contepomi (Argentina) and Hasan Minto (Pakistan).

The project led to a prototype online tool called ASPREX (ASsistive PProduct EXplorer). At the end of the project, it was transferred to a WHO collaborating center (the Global Disability Hub in the UK), in view of possible future developments.