

Training in Assistive Products (TAP) Product specifications

Prepared for the
COVID-19 Response
Assistive Technology project



COVID-19 Response Assistive Technology project

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Walking aids

Overall description

Walking aids support people to walk. There are different types of walking aids for different needs. Directly below is a list of the products that have been included in TAP modules, and a list of examples of products that are not included. The following tables provide information for those products that are included in TAP to assist with product selection.

Products included in TAP	Products not included in TAP
<ul style="list-style-type: none"> • Walking sticks (sometimes called walking cane): <ul style="list-style-type: none"> ○ Single point ○ Tripod ○ Quadripod / tetrapod • Elbow crutches (forearm crutches) • Axilla crutches (underarm crutches) • Walking frames • Rollators (four wheel) 	<ul style="list-style-type: none"> • Handmade products • Low quality products • Posterior walkers (may be included later) • Forearm/gutter crutches • Reciprocal walking frame • Two-wheeled walking frame • Three wheel rollators

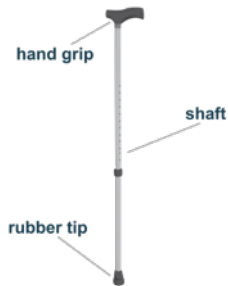


1. Walking stick (sometimes called walking cane)

Description (how and why it is used)

Consists of a handle, shaft and tip. Allows the user to take weight off one leg and/or to help with balance

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> • Made of durable, lightweight material, usually aluminium • Handgrip: usually made of durable plastic or rubber with different shaped handgrips available • Tips: non-slip, replaceable, made of durable rubber • Shaft: height adjustable (via clip or push button) 	<ul style="list-style-type: none"> • Foldable

Examples

Walking stick – single point	Walking stick - tripod	Walking stick - quadripod/tetrapod
		



2. Elbow crutch or forearm crutch

Description (how and why it is used)

Consists of a handgrip, forearm cuff, shaft and tip. Allows the user to transfer some or all of their weight from one leg to their arms.

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> Made of durable lightweight material, usually aluminium Handgrip: usually made of durable plastic or rubber Forearm cuff: fits around the forearm below the elbow, usually made of durable plastic Tips: non-slip and replaceable, usually made of durable rubber Adjustment: length of the shaft should be height adjustable (via clip or push button) 	<ul style="list-style-type: none"> Forearm cuff position can be adjusted

Examples

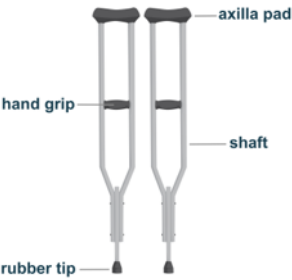

Elbow crutches – single adjustment	Elbow crutches in use
 <p>The diagram shows two elbow crutches standing side-by-side. Labels with lines pointing to the parts are: 'elbow cuff' at the top, 'handgrip' on the side, 'shaft' along the main vertical part, and 'rubber tip' at the bottom.</p>	 <p>An illustration of a man with a beard, wearing an orange shirt and blue pants, walking and using two elbow crutches for support.</p>

3. Axilla crutch or underarm crutch

Description (how and why it is used)

Consists of underarm pad and handgrip, forked vertical shaft and tip. Allows the user to transfer some or all of their weight from one leg to the arms.

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> Made of wood or durable lightweight metal, usually aluminium Underarm pad and handgrip: durable, well padded with soft plastic or foam Tips: non-slip and replaceable, usually made of durable rubber Shaft and handgrip: height adjustable (via clip, push button or screw and wing nut) 	-

Examples	
Axilla crutches	Axilla crutches in use
	

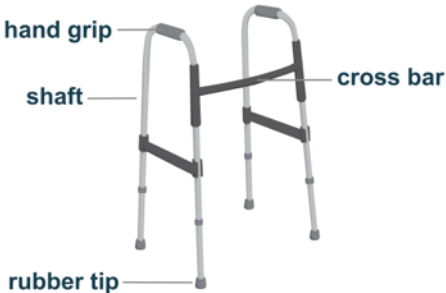

4. Walking frame

Description (how and why it is used)

Consists of a frame with handgrips on the top, four legs/shafts with tips and lateral bars. Allows the user to maintain balance, stability and to take weight from one leg. The user must lift the frame and place it in front of them to step forward

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> Frame: Made of durable lightweight metal, usually aluminium Height adjustable (via clip or push button) Handgrip: Made of durable rubber or firm foam Tips: Non-slip and replaceable, durable rubber 	<ul style="list-style-type: none"> Foldable

Examples

Walking frame – with four tips	Walking frame – folded for carrying on wheelchair
	

5. Rollator

Description (how and why it is used)

Consist of a frame with built-in handles, brakes, four wheels and four legs/shafts with lateral bars. Allows the user to maintain balance when walking. User gently rolls the rollator as they step forward and uses the breaks to slow down.

Features (materials, parts and adjustment)

- Frame: Made of durable lightweight metal, usually aluminium
- Height adjustable
- Handles: durable, usually made of plastic
- Brakes: provided with a braking system
- Wheels: four solid castor wheels

Optional features

- A seat and basket

Examples

Rollator in use (with seat and basket)



Rollator – four wheels, seat and basket



Therapeutic footwear

Description (how and why it is used)

Therapeutic footwear are shoes with specialized features offering enhanced protective and supportive function for feet at risk of wound development. This assistive technology aims to help prevent foot wounds, avoidable amputations and deaths. Design must fit the foot properly, fasten snugly to prevent movement of the foot, accommodate the shape of the foot and allow for bony deformities, accommodate orthotics or insoles, whilst providing support and reducing plantar pressure concentrations.

Essential features (materials, parts and adjustment)

Materials

- Comfortable, durable, breathable, fast drying material, that does not cause pressure or friction
- Shoe uppers: leather, canvas, mesh or fabric (breathable / durable) with as few seams as possible
- Outsole: rubber, polyurethane, EVA, or similar
- Adequate cushioning in the sole to improve comfort and provide shock absorption

Adjustments

- Adjustable straps, velcro, buckle or shoelaces
- Easily adjustable for varied levels of ability

Parts and/or key features

- Removable pressure redistributing insole
- Shoe depth to accommodate orthosis
- Low heel height
- Wide and deep toe boxes
- Wide heel base; heel strap or heel support with a firm heel counter
- Cuff around ankle with rolled seams
- Built-in forefoot rocker of durable rubber composite that is durable on rough ground and easily repaired with shoe glue

Optional features

- Covered toe area (depending on context and climate)
- Covered heel area (if open, it should be secured with strap)
- Curved forefoot outersole to accommodate for wide metatarsal forefoot

Products included in TAP

- Shoes available in different sizes, shapes and widths
- Shoes with covered or open toe area
- Shoes with covered or open heel area
- Closed shoe, sandal, rocker bottom soled shoe
- Removable insoles to redistribute pressure, provide support and cushioning, made of materials that are durable, mouldable and washable
- Aesthetically pleasing, comfortable to wear and reduce plantar pressure while walking.

Products not included in TAP

- Plastic or other non-breathable materials for shoe uppers (unless mesh)
- Outersole made of plastic and/or cardboard
- Shoes with overly soft/flexible outersole
- Shoes with straight, rigid, thin outersole
- Shoes with no adjustable closure
- Shoes with excessive heel height (over 1.5cm)
- Flip flop or thong design

Examples

Closed shoe	Open-toe sandal	Open-heel shoe
		

Toilet and shower chairs

1. Toilet chairs

Description (how and why it is used)

Toilet chairs help people who find it difficult to either get to, or sit down and stand up from, a standard toilet. The chairs have rust-resistant metal or PVC frames, and a removable bucket. Some toilet chairs have wheels or castors to make it easier to move the chair or so that the person may be pushed over the toilet.

Essential features (materials, parts and adjustment)

- Fits over toilet (sitting or squat toilet)
- Rust and water resistant
- Smooth finish to prevent injury
- Removable bucket
- Height adjustable
- Armrests
- Rubber stoppers on legs (unless wheels)
- Brakes and footrests (if wheels)
- Specification for the maximum weight of the user clearly stated on product or packaging

Optional features

- Armrests may be removable and/or swing away
- Seat/backrest may be padded

Products included in the TAP module

- Toilet chairs with wheels
- Toilet chairs without wheels

Products not included in TAP

- Raised toilet seats (with no frame/arm rests)

Examples

Toilet chair with wheels over a squat toilet



Toilet chair with wheels and bucket



Toilet chair over a sitting toilet



2. Shower chairs

Description (how and why it is used)

Shower chairs help people who find it hard to get to a bathing area or stand up to wash. The chairs have rust-resistant metal or PVC frames. Some have wheels or castors so that the person may be pushed into the shower.

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> • Strong and durable • Rust and water resistant • Smooth finish to prevent injury • Height adjustable • Rubber stoppers on legs (unless wheels) • Brakes and footrests (if wheels) • Specification for the maximum weight of the user clearly stated on product or packaging 	<ul style="list-style-type: none"> • Armrests may be removable and/or swing away • Seat/backrest may be padded
Products included in the TAP module	Products not included in TAP
<ul style="list-style-type: none"> • Shower chairs and shower stools • Shower chairs with wheels 	<ul style="list-style-type: none"> • Bath tub benches

Examples

Shower chair with wheels	Shower chair without wheels	Shower stool
		

Washable absorbent products for moderate / heavy incontinence

Overall description

Washable absorbent incontinence products absorb urine and/or contain faeces. Their purpose is to protect a person's clothes and environment; preserving their dignity, comfort and quality of life.

Products included in TAP

- All-in-ones
- Two-piece systems
- Additional:
 - Washable unbacked pad
 - Washable or disposable liner

Products not included in TAP

- Products for light urinary incontinence (such as small reusable pads, underwear with small built in pads, reusable 'leaf' or 'pouch' style pads for men).

Essential features

Washable, absorbent fabric (typically cotton towelling, may be bamboo, rayon or polyester).

Washable waterproof component, which may be a pant with elasticated legs and waist, or shaped plastic sheet fastened or tied in place.

Fastening device or system for each component, which may be safety pins, clips, velcro or buttons depending on the product.

Range of child and adult sizes (relevant to population group) to be available; at least 3 of each component per person (suggest in TAP recommend more as washing facilities likely more difficult for many).

Optional features

Additional washable pads can be used to improve absorbency (by increasing capacity or locating where most needed)

Disposable or washable liners to collect and help with disposal of faeces

Products included in TAP

All-in-ones: Washable absorbent fabric with a waterproof outer covering, fastened with buttons or other type of fastener.

Examples



Two-piece systems: These consist of:

- Washable, unbacked fabric (square or shaped), held in place with a fastener (such as safety pin or clip)
- Waterproof layer over the fabric. May be waterproof pants with elasticated waist and leg, or a shaped sheet which is fastened or tied. This layer helps to secure the fabric (absorbent) layer and minimise leakage.

Absorbent layer (shown here with additional pad)



Additional:

Washable unbacked pad (without waterproof backing): Placed inside all-in-ones or two-piece systems to for more absorption where most needed.

Washable or disposable liner: To collect faeces and make disposal easier.

Reading glasses

Reading glasses

Description (how and why it is used)

Reading glasses are used by people who have difficulty seeing up close due to ageing (presbyopia). Reading glasses help a person with presbyopia carry out activities within arms-reach, such as sewing, reading, writing, cooking, harvesting, repairing, or using a mobile phone. Reading glasses sit on the face leaving both hands free to complete tasks.

Standard reading glasses are available in a range of fixed strength which may range from +1.00 to +4.00. The right and left lenses are usually the same strength.

Products included in TAP	Products not included in TAP
<ul style="list-style-type: none"> Reading glasses, strength from +1.00 to +3.00 	<ul style="list-style-type: none"> Reading glasses with a strength greater than +3.00 Prescription glasses (for people with refractive errors such as myopia (nearsightedness), hyperopia (farsightedness), and astigmatism) Correction that varies between left and right eye
Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> Consists of frame and lenses Plastic lens, scratch resistant Plastic or metal frames Provided with a protective case or sleeve Strength for each pair marked on packaging 	<ul style="list-style-type: none"> Provided with cleaning cloth <p>Lens type:</p> <ul style="list-style-type: none"> Single vision (whole lens is active) or Bifocal (active section of the lens is the bottom half only. The top half of the lens is clear)

Examples

Reading glasses in use	Reading glasses	Reading glasses in case
		

Magnifiers and telescopes

Overall description

Magnifiers and telescopes are low vision assistive products that make objects appear larger. They can assist people with low vision to see objects, pictures or printing that they might not otherwise be able to see.

There are many different optical magnifiers available. Directly below is a list of the products that have been included in TAP modules, and a list of examples of products that are not included. The following tables provide information for those products that are included in TAP to assist with product selection.

Products included in TAP	Products not included in TAP
<ul style="list-style-type: none"> • Hand held magnifiers with and without a light • Stand magnifiers • Dome magnifiers • Sheet magnifiers with an adjustable stand • Neck magnifiers • Hand held telescopes (monocular) 	<ul style="list-style-type: none"> • Magnifiers with magnification greater than 6x • Spectacle magnifiers • Digital / electronic magnifiers or telescopes • Smart phone or computer magnifying applications • Binocular telescopes • Filters

1. Hand held magnifiers


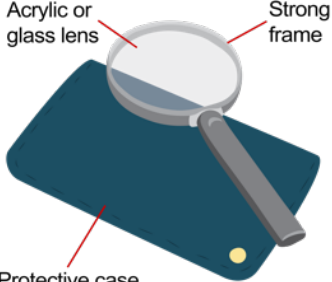
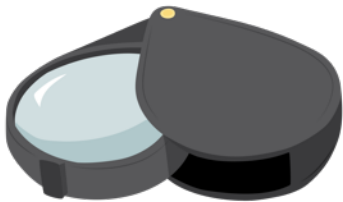
Description (how and why it is used)

Used to assist near vision, ideally after refractive error has been assessed and possible correction (e.g. with prescription glasses and/or other management) provided.

Hand held magnifiers make items appear larger, making them easier to see. Useful for spot viewing.

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> • Magnification: Range between 2x - 4x (4D – 16D) • Lightweight, durable frame • Acrylic or glass lens • Protective case or sleeve 	<ul style="list-style-type: none"> • Include in range an option with in-built LED light (illuminated) ensuring batteries compatible with local supply or provide spare batteries • Higher range of magnification

Examples

Simple hand held magnifier	Hand held magnifier, key features	Pocket magnifier
		

2. Stand magnifiers

Description (how and why it is used)


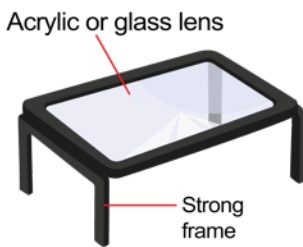
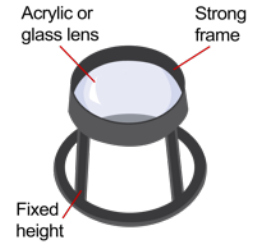
Used to assist near vision, ideally after refractive error has been assessed and possible correction with prescription glasses and/or other management has been provided.

Stand magnifiers have 'legs' that stand over a page or object, placing the magnifier at a fixed distance from the object being viewed.

Stand magnifiers are suitable for people who need to use their hands for a task such as writing or sewing, or for someone who is unable to hold a hand magnifier.

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> Magnification: Range between 2x - 5x (4D – 20D) Stable, strong frame Height is fixed (not adjustable) relative to the power to achieve focus and best field of view 	<ul style="list-style-type: none"> Include in range an option with in-built LED light (illuminated) ensuring batteries compatible with local supply or provide spare batteries

Examples

Stand magnifier in use	Stand magnifier – rectangular	Stand magnifier - round
		

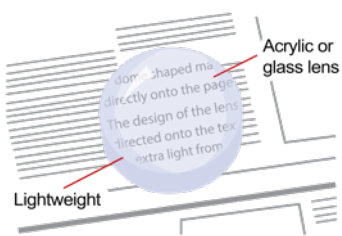

3. Dome magnifiers (technically these are also a stand magnifier as the distance to object is fixed)

Description (how and why it is used)

Used to assist near vision, ideally after refractive error has been assessed and possible correction with prescription glasses and/or other management has been provided. Dome magnifiers sit on a page; help direct natural light onto a page; and can be used by a child or adult with low hand strength or coordination.

Essential features (materials, parts and adjustment)	Optional features
<ul style="list-style-type: none"> Magnification: Range between 1.8x – 6x (8D – 24D) Acrylic lens Protective case or sleeve 	-

Examples

Dome magnifier	Dome magnifier in use
	

4. Sheet magnifiers with an adjustable stand

Description (how and why it is used)

Used to assist near vision, ideally after refractive error has been assessed and possible correction with prescription glasses and/or other management has been provided.

Sheet magnifiers are different to stand magnifiers as they are **not set at a fixed height**. The person positions the magnifier at the correct distance from the object to see the object clearly. Sheet magnifiers are usually attached to an adjustable stand. Once the correct distance from the object is found, the stand is fixed to maintain that distance. Sheet magnifiers on an adjustable stand are suitable for people who need to use their hands for a task such as writing or sewing, or for people who cannot hold a hand magnifier.

Essential features (materials, parts and adjustment)

- Magnification: Range between 2x to 4x (8D – 16D)
- Acrylic lens

Optional features

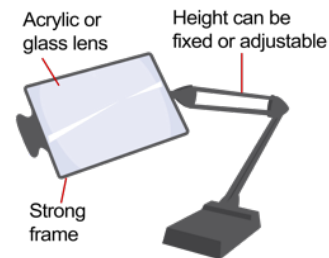
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Examples

Sheet magnifier with an adjustable stand in use



Sheet magnifier with a stand



5. Neck magnifiers (may be called 'hand free magnifiers' or 'chest magnifier')

Description (how and why it is used)

Used to assist near vision, ideally after refractive error has been assessed and possible correction (e.g. with prescription glasses and/or other management) provided.

Neck magnifiers are another option for people who need to use their hands for a task. The magnifier hangs around the person's neck on an adjustable cord. It is stabilised against the person's chest. The user places the object they are viewing at the correct distance for it to be seen clearly.

Essential features (materials, parts and adjustment)

- Magnification: Range between 2x to 4x (8D – 16D)
- Acrylic lens

Optional features

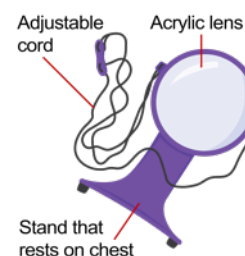
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Examples

Neck magnifier in use



Neck magnifier



6. Hand held telescopes

Description (how and why it is used)

Assist with distance vision for people with low vision, always after refractive error has been assessed and possible correction with prescription glasses and/or other management has been provided. Can be used for example to read from a blackboard, see objects such as street signs or people across a room.

Essential features (materials, parts and adjustment)

- Magnification: Range between 2x to 6x
- Monocular (for viewing with one eye)
- Acrylic lens
- Provided with protective bag and wrist strap

Optional features

-

Examples

Telescope in use	Telescope	Telescope with case
		