The Dynamic Head Suspension System
Introduction

HeadPod allows the user to maintain an upright position without restricting the movements of the head

HEADPOD KEEPS YOUR HEAD UP
Introduction

• Our head’s **natural position** is upright.

• **Without** head movement, we are not able to properly receive all the **information** from our **surroundings**.

• **Lack of** movement leads to increased weakness of the muscles of the neck. Movement promotes **strengthening** of the muscles of neck.

• **Any misalignment** of the head will lead to **future problems**, thus, **HeadPod** is as well an investment to avoid future expenses.
**Problem:** If we maintain an upright position, the head leans forward leading to bad posture habits, and if we recline the backrest, the user will not be in a good functional and physiological posture and not exercising the muscles of the neck.
Other Systems

Until now, the solution was to restrict the movements of the head.
How it works
How it works

- The HeadPod maintains the weight of the head in **equilibrium** over the shoulders
- The HeadPod maintains the **head aligned** with the trunk.
- Once aligned, the user can move and rotate the head **effortlessly**
- Due to this little effort, the continued use promotes the **strengthening** of the neck muscles
- It is **not** meant to do any upward **traction** force or correct any already structured misalignment (fixed curvatures)
How it works

**Headpod** helps maintain the head in equilibrium over the shoulders

Unloading most of its weight on the cervical column
Examples (before/after)

With

Without Headpod

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Keeps your head up
Examples

Note the difference between a restricting Headrest and **HeadPod**

**HeadPod** is great in combination with Augmented Communications devices

**HeadPod** is very useful for caregivers and therapists
How it works

Sidati, our first user ever to try the HeadPod. He was very hypotonic but within two years was able to maintain his head up.
Our best indication: Kids between 2 and 14 years old

Older children and adults can also benefit from HeadPod as long as their head remains aligned with the trunk and there is no significant kyphosis or spinal deformities.

The HeadPod is not meant to correct any of these fixed problems, only helps maintain the head in alignment.
Benefits

- Helps maintaining an **upright**, balanced position without restricting its movements. This activity helps **to strengthen** the neck muscles.
- Facilitates **feeding** at mealtime.
- Helps **prevent** musculoskeletal **deformities**, contractures and pain associated with both.
- Allows for better visual **interaction** with surroundings.
- Allows a more **relaxed muscle tone** with less dystonia, leading to a better performance in therapy sessions and school.
- Allows for **easier breathing**, thus reducing complications such as respiratory failure, pneumonia, bronchiectasis and so on.
- Improves hand to eye **coordination**.
- Decreases **drooling**.
- Improves ergonomics and prevents injury to **caregiving** professionals.
Fitting the Headpod

Step one: Adjusting the width of the arc
Adjust both sides symmetrically until the orange parts are not touching the skin. If using the Mini Kit, choose the arc that fits better without touching the skin.

Step two: Adjust the occipital mesh
It needs to be symmetrical and as close to the ears as possible, without running over them.

Step three: Adjusting the Frontal Strap
In the same place as the occipital strap. It does not need to be symmetrical.

Make sure the tab “back” looks upwards.

The orange parts need to be 2cm (2/3in) in front of the ears.

Do not fit too tight the frontal strap. Only enough so it will not slip off.
Fitting the Headpod

The occipital mesh should be located as low as possible touching the back of the ears.

Make sure the arc is parallel to the forehead.

While holding the chin, insert the ladder strap in the suspension arm in the hole that will render the head weightless.

It should not do any upward traction.

In order to make sure everything is ok, just follow this simple five steps checklist.

1. Use a harness
2. Place the orange pieces about two centimeters (3/4 inch) in front of both ears
3. Place the occipital mesh as close as possible to the back of the ears without going on top of them
4. Backrest at 80°
5. Place the suspension arm horizontally

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Keeps your head up
The **HeadPod** is one product but there are three different Kits

All Three Kits contain one Headpod, three adapters and four accessories.

- **HP100 HeadPod Kit**: Contains an adjustable arc, three adapters and four accessories.

- **HP 102 HeadPod Kit Mini**: Contains two smaller non adjustable arcs and the same three adapters and four accessories.

- **HP104 HeadPod Kit Max**: Contains one HP100 Headpod Kit plus an adjustable Headrest specially designed for Headpod.
The Product

HP100 Headpod Kit

HP102 Headpod Kit Mini

HP104 Headpod Kit Max

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The Product

The HeadPod Harness:

- **Suspension Arm**
- **Adaptable Arc** (HP100 & HP104)
- **Fixed Arcs** (HP102 Kit Mini) For head perimeter <48cm/18in
- **Frontal Strap**
- **Occipital Strap**

OR
The Product

The Headpod Adapters (Included in all the Kits):

HP401 Adapter “A”  
For Headrests

HP402 Adapter “B”  
For Rigid Backseats

HP403 Adapter “C”  
For 15x15mm tubes
The Product

HP401 Adapter “A” Mounting Examples:

- R82 Headrest
- Stealth Headrest
- Conventional Headrest
- Special Tomato

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The Product

HP402 Adapter “B” Mounting Examples:

- Strollers / rigid back seat chairs
- Placing a **wooden board** behind cushion or mould

This is a very simple and cost effective solution when we cannot place any of the adapters. We only need to place a wooden board tall enough so the suspension arm will be conveniently located above the back of the head.
The Product

HP403 Adapter “C” Mounting Examples:

Fits in any 15x15mm tube
The Product

The HeadPod Accessories: (Included in all Kits)

HP511 Extender

HP510 Angle Modifier

HP307 Anti Slip Strap

HP308 Chin Strap
The Product

The HeadPod Accessories: (Included in all Kits)

**HP511 Extender** Helps gaining height.
If there is not enough height, it will limit the sideways movements of the head. Please allow at least three free holes.
The Product

The **HeadPod** Accessories: (Included in all Kits)

**HP510 Angle Modifier** Helps correct the angle, can be placed in any adapter
The Product

The **HeadPod** Accessories: (Included in all Kits)

**HP307 Anti Slip Strap**
Helps prevent the occipital strap to slip upwards. It will not restrict rotation.

- **Strap:** to be positioned between the back and the backrest
- **Pendant:** threaded in the occipital mesh

- First, we insert the pendant with the Velcro facing backwards in the middle holes of the occipital mesh.
- Then we place the strap in the backrest which will get trapped with the users back.
- Finally we will find the point in which the strap meets with the Velcro with some tension.
The Product

The **HeadPod** Accessories: (Included in all Kits)

**HP308 Chin Strap:** Very useful when the frontal strap slips upwards or the patient moves too much. It will not put pressure on the chin, only a bit of tension in the chin but will prevent the orange parts slipping upwards, while improving alignment.

Removing the black pin is not needed, keep it always inserted and just place and remove the silicone strap.
Difficult Cases:

Sometimes due to a flat back head, very fine or sparse hair, the HeadPod may have trouble staying in place. That is why the Kits include both the Anti Slip and Chin Strap. So there are three options:

1. **Nothing**: If the HeadPod stays in place, we recommend not to use anything.

2. **Anti Slip Strap**: In case the Occipital Mesh slips upwards.

3. **Chin Strap**: In case the Frontal strap slips upwards.
The Accessories

Not included in the Kits (Except HP406 in Kit Max)

HP406 Adjustable Headrest
(Included in HP104 Kit Max or sold separately)
Adjustable headrest specially designed for HeadPod. It’s flat surface does not limit rotation and provides the best, firmest possible adaptation.

HP407 Adaptor C with mounting bracket
Mounting bracket with tube and our Adapter C with thumbscrews.

HP408 Mounting Bracket
For seamless adaptation in any Headrest

HP409 “U” shaped mounting bracket
Very useful if not possible to use the HP408 because of a tube or any other element
The Accessories

HP406 Adjustable Headrest
Available as an accessory or in HP104 Kit Max

With a specially designed insert hole for the HeadPod Suspension Arm,
• This adjustable headrest is the best possible adaptation solution as it is very firm, reliable and stable.
• It’s flat surface will not limit the free movements of the head as other head supports do.
The Accessories

HP407 Backrest Mounting Bracket

In case we wish to provide a more stable and definitive solution. It can be mounted on the back rest of any chair or big headrests. A small 15 cm tube is provided (longer tube available).

Consists of:

- 15x15mm Tube
- 15cm long
- Adapter C with thumbscrews
- Mounting Bracket
The Accessories

HP408 Headrest Mounting Bracket

In case we wish to provide a more stable and definitive solution. It can be mounted on almost any headrest on the market.

Consists of:

- Black insert
- Mounting Bracket

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The Accessories

HP410 “U” Shaped Headrest Mounting Bracket

In the situation where it is not possible to use the HP408 due to mounting restrictions at the back of the Headrest, the “U” shape bracket is an option. It is also compatible with some R82 headrest hardware.
The Accessories

HP404 Conventional Wheelchair Adapter

It fits most conventional wheelchairs by securing a metallic profile to the push tubes of the chair, resulting in a firm adaptation.
Adaptations

The **HeadPod** can be adapted to many different types of Equipment:

- Standers
- Walkers
- Gait Trainers
- Trikes
- Spider cage
- Moulds
Adaptations

The **HeadPod** can be adapted to many different types of Equipment
And some are not very common...

- Electric Chair
- Back Pack
- Carts
- Submarines
Headpod means Movement!

And movement is improvement
• **Has the Headpod any contraindications?:**
  After four years in the market, we are not aware of any, but as a medical device it should be only used under direct supervision.

• **How long should it be used each day?:**
  Depends on the need of the user. Some will only need it during mealtime or computer activity. Some others will need it all day long. Use it as long as is needed or until the user shows some fatigue.

• **Can I use it in a reclined chair?:**
  Not really as it will not be of any use. The **HeadPod** balances the weight of the head over the shoulders providing support when it moves out of balance. If reclined a point of balance cannot be achieved.

• **What is the warranty coverage?:**
  The **HeadPod** is guaranteed for two years for defects in materials or manufacturing. This does not cover improper use or natural wear or tear.
Research

There is an increasing number of research performed on the Headpod. Up to this date we know about six studies whose abstracts can be consulted here: Abstracts

- **Effects of a new dynamic head suspension device in feeding people with loss of head control.** Jan 2013, ASPACE, Navarra. Spain. Auth: Mónica Arroyo Noriega OT, Lourdes Lopetegui Jaunsaras MD

- **Headpod: Use of an innovative dynamic suspension system in a case of spastic tetraparesia with axia hypotonia.** Sep. 2013, Instituto de Neurehabilitación Neural, Valencia – Spain, Auth: Martínez B, Téllez de Meneses Mª, Gutierrez Mª Huerta P. Cruz S. Valderrama J.

- **Posture and manual function with PC kids with the use of a Head Suspension device. Crossover trials.** Jun 2015, Universidad de Alcalá, Madrid-Spain, Auth: Irene Ferro Galardi

- **Effectiveness of the Headpod device during feeding in kids with disfagia due to neuromotor pathology:** an open clinical trial. Nov 2015, CPEE Angel Riviere, Zaragoza, Spain, Auth: Martínez B, Téllez de Meneses Mª, Gutierrez Mª Huerta P. Cruz S. Valderrama J.

- **Issue of maintaining the head upright in kids with polidisability with general hypotonia: proposition of different devices starting from a clinical case.** Nov 2015, Service des Pathologies Neurologiques Congenitales, INRC. France, Auth: I. Goffard, H. Lebrault

- **Assessment of the use of Headpod in kids without head control.** Jan 2016, Universidad de Salamanca, Spain. Auth: Eva Galarrón Pérez.
THANKS!