

# Guidelines for referring children with orthopaedic conditions to The Children's Physiotherapy Service



## Referral guidelines for the Paediatric Physiotherapy

### Aim/Purpose of this Guideline

This guideline are for use by health professionals to ensure children with musculoskeletal and orthopaedic conditions are referred to appropriate services.

Children's physiotherapy aim's to assess and treat children with physical disabilities and difficulties to aid independence. Cambridgeshire Community Services NHS Trust Children's Community Physiotherapy Service and MSK Service will not be accepting Musculoskeletal or Orthopedic conditions apart from the following non complex orthopaedic condition

- Obstetric Brachial Plexus Palsy (Erb's)
- Torticollis

These two conditions will be seen to ensure that a screening for neurological conditions can occur and that the baby is treated early. Evidence shows that early intervention is essential in these conditions.

Other paediatric orthopaedic developmental variations occur during infancy and childhood, are commonly mistaken for deformities and usually resolve with growth.

Ensure differential diagnosis — 5'S symmetry, symptom, stiffness, systemic and skeletal dysplasia

Condition	Acceptance to physiotherapy	Support
<b>Obstetric Brachial Plexus Palsy (Erbs)</b>	Yes. Refer to Children's Community Physiotherapy	
<b>Mouldered head</b>	No If associated with torticollis – Yes Refer to Children's Community Physiotherapy	Positions for play leaflet
<b>Torticollis</b>	Yes. Refer to Children's Community Physiotherapy	
<b>Flat feet</b>	Orthotic	Staheli Leaflet
<b>Foot alignment Eg talipes, Pes Cavus, curly toes, metatarsal adductus</b>	No Normal variant that should resolve Fixed Paediatric Orthopaedic Consultant	
<b>Lower limb alignment Intoeing, out toeing, knocked knees, toe walking.</b>	No Normal variant that should resolve	Staheli leaflet
<b>Pain Acute or chronic due to growth, trauma, injury or hypermobility</b>	No	Hypermobility leaflet
<b>Hypermobility</b>	No	Hypermobility leaflet
<b>Post fracture or consultant contact</b>	No The tariff is with the acute provider	

## **Obstetric Brachial Plexus Palsy**

A child presenting with a brachial plexus palsy should be referred \ urgently to the Children's Physiotherapy team. An X-ray of clavicles is required to exclude fractures.

A Consultant Orthopaedic Surgeon does not need to routinely be \ informed of new babies with Obstetric Brachial Plexus Palsy .

**Yes, please refer to Children's Community Physiotherapy**

## **Moulded/Flat Head**

Head moulding is very common either inter uterine or due to positioning.

**Plagiocephaly** The most common type of moulding and it describes an asymmetric flattening to the side of the head.

**Brachycephaly** This is a wide head shape which can be very flat all across the back. The head can be very high at the back and the forehead may be very pronounced.

**Scaphocephaly** This is a long thin head shape

**No , please do not refer**

—Give advise sheet and tummy time leaflet.  
Prevention is better than cure (Hummel et al 2005)

**Yes, please refer to Children's Community Physiotherapy**

- Only if any limitation to head turning
- If any developmental delay

**Refer to Paediatrician**

- If syndromic or synostotic in condition.
- If not resolving with advice

## **Torticollis**

Torticollis refers to a reduced neck range of movement caused by a shortened sternocleidomastoid muscle.

Torticollis is seen at all ages, from newborns to adults.

It can be congenital or acquired and a lump muscle may be present.

**Babies** Yes, please refer all babies as soon as identified to Children's Community Physiotherapy

**Children** Yes, please refer to Paediatrician

### **Flat Feet**

Most children learn to walk with a wide base and flat feet. Heels may be valgus (tilting in) due to this and due to the normal variation of knocked knees which resolves around the age of 6. Babies and toddlers also have a fatty tissue on the soles of their feet. Flexible flat feet is a normal variant. Most children spontaneously develop a strong normal arch by around age 10.

### **No, please do not refer**

- For an asymptomatic (no symptomatic) flexible flat foot.
- For parental concern, consider discussing Staheli parents leaflet and see Management of Children with Flatfeet leaflet.

**There is no evidence that orthosis will produce an arch.**

### **However, Yes, please refer to orthotics**

- If there is associated pain in the feet.
- If there are signs of pressure on the foot (blistering).

### **Yes, please refer for Consultant opinion**

- If the longitudinal arch does not form normally, when the child stands on tiptoe.
- Asymmetrical flat feet
- If the foot is stiff.

## **Pes Cavus**

This is the opposite of flat feet and it is when the arch is extremely pronounced. It is rarely seen and is usually indicative of a neurological case, thus referral to a paediatric neurologist or paediatrician is the most appropriate action to take.

## **Curly Crossed Toes**

Most will resolve spontaneously and/or are asymptomatic. A doctor may assess these, however there is no evidence that Physiotherapy, Podiatry or Orthotics will be of help.

## **Fixed/Congenital Talipes Equinovarus(CTEV)**

Any child with fixed talipes equinovarus should be referred urgently to the Paediatric Orthopaedic Team.

## **Positional Deformities of the feet**

Positional flexible deformities foot e.g. Positional talipes equinovarus, calcaneovalgus (marked dorsiflexion).

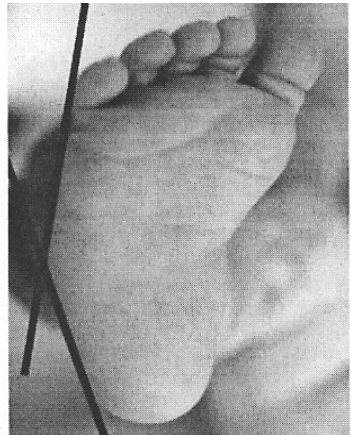
Metatarsus adductus (Inward pointing forefoot see fig.1), are most often caused by intrauterine moulding.

## **No, please do not refer**

Will often resolve on the own within 4 months, however Metatarsal adductus will take longer up to aged 6. (Staheli parent leaflet)

## **Yes, please refer to Paediatric Orthopaedics**

- If fixed
- If marked/severe
- If slow to resolve



*Fig.1 –Metatarsal Adductus*

## Tip toe walking

Many children will tiptoe walk when first starting to weight bear and first starting to walk. Persistent tiptoe walking, once walking is fully established, may be a symptom of a neurological disorder and developmental behavioral concerns or may be associated with tight tendo achilles.

Assess the child once walking is well established eg .when walking independently for minimum of 6 months

## Yes, please refer to Paediatrician

- If associated with behavioral developmental delay.
- If the toe walking is asymmetrical.
- **NO, please do not refer to children's physiotherapy**  
If the toe walking is intermittent.
- If functional is as expected including associated learning and behavioural concern
- If the child is able to squat to play on the floor (eg. no tightness of calf muscle).

## Check 5 S for differential diagnosis

**Asymmetrical hip rotations or abduction refer for x-ray**

## **Out-toeing**

Asymptomatic symmetrical out-toeing can be a normal variant .

### **Infants 0-2 years**

Asymptomatic symmetrical out-toeing is very common in infancy due to lateral hip rotational contractures which resolves spontaneously and thus referral to physiotherapy is generally not necessary.

### **Child/Adolescents**

Asymptomatic symmetrical out-toeing is caused by either external tibial torsion, proximal femoral retroversion or a combination of the two.

### **No, Physiotherapy is not indicated.**

However it is essential to ensure a differential diagnosis for DDH, Perthes, Slipped upper femoral epiphysis (SUFE) etc has been ruled out all passive hip ranges of movement must be checked. 5'S

### **Yes, Please refer to A/E for any sudden onset of out-toeing following trauma (can be low level)**

### **Yes, Please refer for x ray**

- Asymmetrical out-toeing whether asymptomatic or symptomatic
- Asymmetrical hip rotations or abduction
- Associated limp



## **In-toeing**

Is a variation of normal that is commonly mistaken for deformity. Usually in-toeing will spontaneously resolve and naturally unwind as the child grows and the musculoskeletal system mature by the age of 11 years.

## **Toddlers due to tibial torsion 1-5 years**

In-toeing is very common during the 2nd year of life and is noticed when the infant starts to walk. It is most commonly caused by internal tibial torsion either bilateral or unilateral, and as discussed will resolve. Internal tibial torsion is a normal variant up to 7 years of age.

## **Metatarsal adductus**

Can cause an in-toeing gait pattern.

## **Searching toe (abduction of the 1st Toe)**

This is due to a relative over pull by Abductor Hallucis in stance phase, often associated with metatarsal adductus and will resolve with maturation of the nervous system around the age of 7 years.

## **No, please do not refer to children's physiotherapy**

For asymptomatic normal variants in toeing, Physiotherapy cannot prevent the tripping often associated with in toeing. For parental concern offer Staheli leaflet.

## **Asymmetrical hip rotations or abduction refer for x-ray**

## **In-toeing cont.**

### **Child 3-10 years**

In-toeing of young children is a common normal variant due to femoral anteversion (anteversion is the angular difference between the axis of the femoral neck and the transcondylar axis of the knee, and increased angles causes increased internal rotation at the hip) and is rarely due to persisting internal tibial torsion. In-toeing is most pronounced between the age of 4-6 years and will continue to decrease. Femoral anteversion is a normal variant up to 10 years of age and is generally symmetrical.

### **No, please do not refer to children's physiotherapy**

Physiotherapy is not indicated for asymptomatic in toeing.

**Asymmetrical hip rotations or abduction refer for x-ray and refer to Paediatric orthopaedics.**

### **Yes, please refer to children's physiotherapy**

If function is not as expected and x ray is clear (if indicated)

**Asymmetrical hip rotations or abduction refer for x-ray.**

## **Genu Varus / Valgus**

The range of normal for knee angle changes with age and is commonly mistaken for deformity.

## **Knock Knees 2- 6 years**

When a child stands with their knees together a gap between their ankles in a normal variant . A gap of 6-7cms between the ankles is normal between the ages of two and four years. The gap must be measure when lying as gravity will have an affect on the gap giving a false positive.

## **No, please do not refer to children's physiotherapy**

Resolve spontaneously by the age of six years.

## **Bow Legs 0-2 years**

This is when there is a small gap between a child's knees when standing with their feet together. This is normally seen in children until the age of two years.

## **No, please do not refer**

## **Yes, please refer to Paediatrician if over 2 years**

## **Hypermobility**

Generalised hypermobility is a normal variant, which requires muscle control and stability. Many children are hypermobile which is marked when they are young and becomes less evident when they become older. It is not possible to identify which children remain hypermobile. It is essential to differentiate between symptomatic and asymptomatic.

Additional symptoms need to be ruled out

- Bladder/bowl
- Low blood pressure
- Esophageal reflux
- Chronic pain
- Chronic fatigue
- Scoliosis

## **No, please do not refer**

- If asymptomatic

**Please give advise regarding general activity and balance advice see sheet**

## **Yes, please refer to children's paediatrician**

- If symptomatic.
- If function is not as expected and x ray is clear (if indicated)

## **Pain**

Ensure differential diagnosis 5S's —symmetry, symptom, stiffness, systemic and skeletal dysplasia are taken into consideration

## **Red flags specific to Children's Pain**

### **History**

- Pre-pubertal children especially <5 years
- Functional disability duration >4 weeks
- Recurrent or worsening pain
- Early morning stiffness
- Night pain
- Fever, weight loss, malaise
- Postural change

### **Examination**

- Fever, tachycardia  
Weight loss, bruising, lymphadenopathy or abdominal mass  
Limp or altered gait
- Altered spine shape or mobility  
Vertebral or intervertebral tenderness  
Neurologic symptoms
- Symmetry

Ensure with knee and hip pain at all hip passive ranges of movement are assessed to ensure a differential diagnosis DDH, Perthes, Slipped Upper Femoral Epiphysis (SUFE) etc has been ruled out.

## **Leg ache or “growing pains”**

Idiopathic, benign discomfort of the extremities, which usually occur at night in the lower limb with a vague bilateral presentation. They do not produce functional disability and resolve spontaneously.

## **Differential diagnosis 5's and red flag's**

**Please give advise regarding general activity and balance advice see sheet**

## **Post Fractures and Consultant Contacts**

The rehabilitation for these contacts is in the acute hospital tariff; therefore, please do not refer to Community Children's Physiotherapy or MSK

## For further information about this service contact:

Children's Therapy Services  
The Peacock Centre  
Brookfields Hospital Campus  
Mill Road  
Cambridge CB1 3DF

**Tel:** 01223 218065

If you require this information in a different format such as in large print or on audio tape, or in a different language please contact the service on the details above.

If you have any compliments about this service or suggestions for improvements, contact our Patient Advice and Liaison Service on 0300 131 1000 (charges may apply depending on your network) or email: [ccs-tr.pals@nhs.net](mailto:ccs-tr.pals@nhs.net).

For free, confidential health advice and information 24 hours a day, 365 days a year please contact NHS 111.