

## **Scottish Sensory Centre ILS Series:**

### **Session Two Handout**

#### **Tying Laces**

For a child or young person with Visual impairment (CYPVI), it can be challenging to learn to tie laces, but it is a good skill to learn as the act of tying transfers to other activities like tying an apron or a tie. Below are some tips for helping CYPVI understand the concept and learn the process as well as two methods for tying laces that can be useful for visual impairment. There are a variety of different methods for tying laces and they won't all work for every CYPVI, it is good to be aware of different methods to help find the right one for the individual.

#### **Preparation for tying Shoes**

##### **Mimicking techniques using their body**

Before they start learning how to tie shoe laces there are few things that can help them understand the process and movements. This starts by getting the CYPVI to make an X with their arms by crossing one arm in front of the other. This mimics the first step of the initial knot. Then ask them to move the arm that is further away from them in towards them and curl it behind the other arm. This mimics making the initial knot. They can also try pulling that same arm away to understand the difference in these to actions and which action will create the knot.

Next it can be helpful to interlock their fingers to understand how the knot works. Ask them to pull their finger tips towards the opposite side of their body and feel how this tightens. Then ask them to pull their hands

in the opposite direction and feel their hands coming apart. These actions mimic tightening and loosening the knot.

It can also be helpful for the CYPVI to practice opening and closing a clothes pin. This helps build up their finger strength, fine motor skills and finger isolation as well as helping them to understand the pinching action. This is also a useful activity for preparing to do fastenings like zippers, buttons and clasps.



### **Practicing making knots**

It helps to start making knots with something that is firmer than a shoe lace, like a length of plastic-coated clothing line. Attaching tape to one end can help them distinguish between the two sides. Start by crossing over the two ends. Then wrapping the end that is underneath up over and through the gap. Then pull tight to make a knot. Once the knot is made they can practice untying it. Using a rigid material makes it easier to untie as it can't get too tight, this is helpful when they are first learning.

### **Tying around leg**

Once they have mastered tying a knot, they can move onto tying around their leg. While sitting down, the CYPVI should put the clothing line (or other rigid material they are using) under their thigh. They should then tie a knot using the same process they have been learning, but this



time they will feel the tightness around their leg.

Once they master this, they can start to learn one of the methods detailed further below

### **Progress to two different colour/texture laces**

The next step is to move on to using laces, it is helpful to tie two different laces together. Choose laces that are distinctively different colours and textures like a round lace and a flat lace. The CYPVI can use these laces to practice the process and methods they have been using.

[Caterpillar laces](#) may be useful as they are two different colours, are firmer than standard laces and have a leg strap to use for practice.



**Black flat lace and white round lace**



**Caterpillar laces**

### **Progress to single lace**

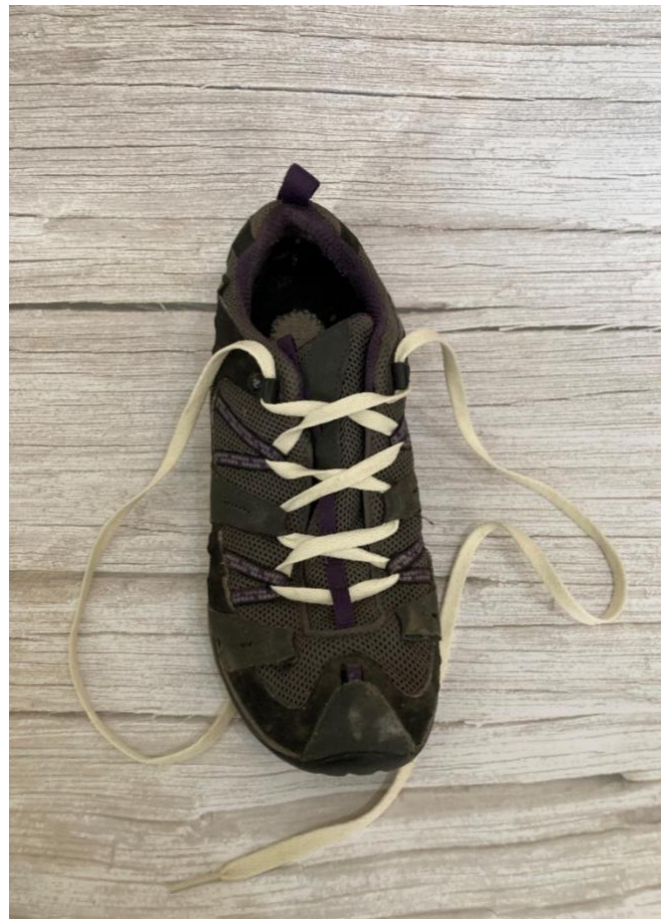
Next, move onto using a single lace around their leg using the same methods they have previously used. Once they are confident with working with the single lace they can move on to using a shoe, either on a table or on their foot.

## **Other considerations**

### **Colour contrasted laces**

If your CYPVI has some residual vision it may help them to have laces that are a different colour than the shoe itself to help them distinguish between the laces and the shoes.

This image shows a dark shoe with light-coloured laces to add contrast and make it easier for the CYPVI to see the laces.



### **Practising untying laces first**

It can help to learn to untie laces first before learning how to tie laces. Give lots of practice with this to understand how laces work and get the feel of them.

### **Learning in stages**

It can help to focus on one step at a time, allowing lots of practice before moving to the next step. This might just be practising the first step of crossing over the two sides or tying the initial knot until they feel confident with this step.

### **Backward Chaining**

For some CYPVI it might help to learn the last step first and work backwards to learn the steps to give them a sense of achievement and reduce frustration. This is referred to as backward chaining and can be applied to other dressing skills.

## **Practice Shoe**

It may help to practice with the shoe on a table in front of the CYPVI first. Make sure the toe is pointing away from the CYPVI. You can use the caterpillar laces or laces that are different colours or textures on a practice shoe if the CYPVI needs this to help them. Once the CYPVI understands the method they can put the shoe on their foot and practice using the method that they have learnt.

## **Double knot**

It may help to make a second knot after the initial knot to make it more secure before tying the bow, especially when learning. Likewise, it can be helpful to make a double knot after tying the bow.

## **Methods and Step by Step instructions**

### **Making the initial knot**

If the CYPVI is using coloured or textured laces it may help to use the names of the colours and textures when explaining the step.

#### **Step one**

While holding each side of the lace, bring your hands together

#### **Step Two**

Cross one lace over the front of the other lace. The lace that was in the right hand will now be in the left hand

#### **Step Three**

Pinch the laces together where they cross over

#### **Step Four**

Use one hand to move the lace that is next to the index finger up over the thumb and through the gap between the two laces

#### **Step Five**

Hold on to the ends of the laces on each side.

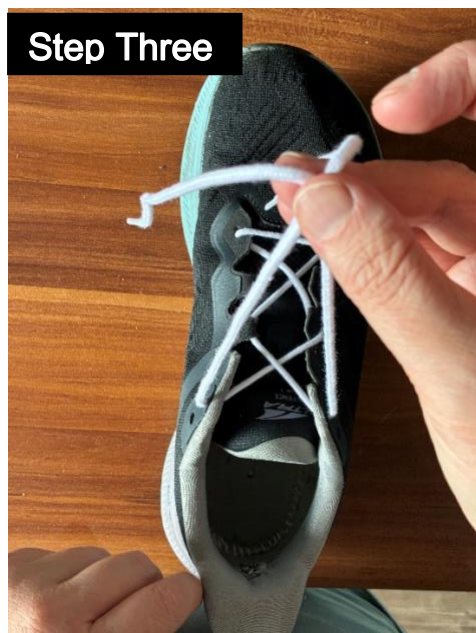
### Step Six

Pull hands apart to tighten the lace.

### Step Seven

To make it more secure repeat the steps to make a second knot.

(optional)



## **Making the bow**

There are various different methods for making a bow. Below are two methods that are useful for CYPVI.

### **Two Bunny Ears Method using hole in shoe**

This method is great for CYPVI who find it difficult to make the bunny ears independently. This requires shoes that have an extra hole at the top of each side.

This method can be done with or without making the initial knot first.

#### **Step One**

Pick up one lace with one hand and locate the extra hole at the top of the same side as that lace with the other hand.

#### **Step Two**

Thread the end of the lace through the hole to create a loop/‘bunny ear’.

#### **Step Three**

Repeat steps one and two on the other side.

#### **Step Four**

Take a hold of the loop/‘bunny ear’ on each side.

#### **Step Five**

Cross one loop/‘bunny ear’ over the other loop/‘bunny ear’.

#### **Step Six**

Using one hand pinch the loops together where they cross over.

#### **Step Seven**

Use one hand to move the loop that is next to the index finger up over the thumb and through the gap between the two loops.

#### **Step Eight**

Hold the end of each loop and pull your hands apart to tighten the bow.

#### **Step Nine**

To make it more secure repeat the steps to make a second knot in the bow. (optional)





## **Gate Method**

This method is great for CYPVI who have mastered the initial knot but struggle with making 'Bunny Ears'. It is very tactile and requires less handling of the laces.

Make an initial knot using the instructions above.

### **Step One**

Cross one lace over the front of the other lace and pinch together where they crossover.

### **Step Two**

Use one hand to move the lace that is next to the index finger up over the thumb and through the gap between the two laces

### **Step Three**

Pull the laces apart but do not tighten completely, stop when there is a gap big enough for your index finger.

### **Step Four**

Put the end of one lace through the gap towards the toe of the shoe

### **Step Five**

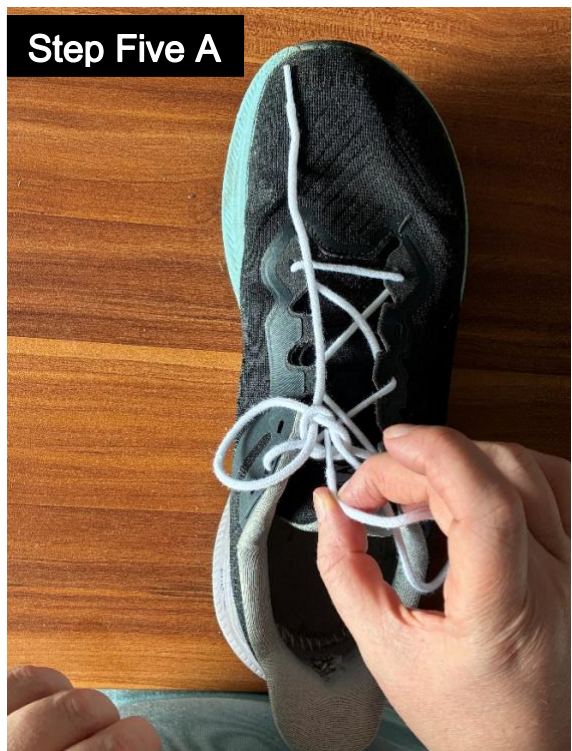
Put the other lace through the gap towards the toe of the shoe

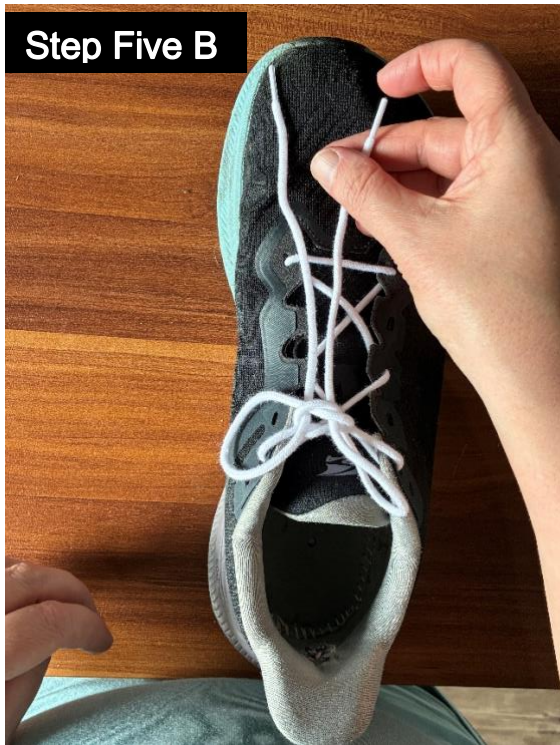
### Step Six

Hold the loops on each side and pull them apart to tighten

### Step Seven

To make the lace more secure you can cross the loops over, then put one loop under the other and tighten to make a double knot. (optional)





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