

## Vancouver Regional Pediatric Team

### **JUMPING**

#### **WHY LEARN TO JUMP?**

Jumping works on:

- Muscle strength – especially calf muscles.
- Balance.
- Foot position – feet need to be shoulder width apart, also helps develop small muscles in the foot and the arch.
- Coordination – coordinates bending and straightening which helps with other skills such as riding a tricycle, stairs, inclines, etc.

#### **HOW TO START**

Observe your child to see which of the following skills he/she can already do. Start at that level. Exercises are ordered from easiest to hardest.

<b>Bouncing</b>	<p>A). Child does not bounce/knees are stiff when bouncing:</p> <ul style="list-style-type: none"> <li>• Hold the child's trunk and bounce him/her up and down on a cushion or trampoline.</li> <li>• Hold child at hips and bounce him/her up and down on a cushion or trampoline.</li> <li>• Hold child's hands and bounce him/her up and down on a cushion or trampoline.</li> </ul> <p>B). Child is able to bounce:</p> <ul style="list-style-type: none"> <li>• Bounce on bed holding onto headboard.</li> <li>• Bounce on sofa cushion on floor holding on to the arm of the couch.</li> <li>• As above without holding on, or holding with one hand.</li> </ul>
<b>Standing On Tiptoes</b>	<p>A). Child is not able to stand on tiptoes:</p> <ul style="list-style-type: none"> <li>• Support child at hips and help him/her reach for toys above head by reaching on tiptoes.</li> <li>• Help child pull him/herself up onto tiptoes holding on to counter or table.</li> </ul> <p>B). Child is able to stand on tiptoes:</p> <ul style="list-style-type: none"> <li>• Place some toys on the floor and others on counter. Have child bend down then reach up on tiptoes for others.</li> <li>• Have child stand on tiptoes without holding on.</li> <li>• Have child take steps on tiptoes (holding on initially, then eventually without holding on).</li> </ul>
<b>Bouncing On Tiptoes</b>	<p>This works on the propulsion (pushing) phase of jumping. The child will probably need to hold on.</p> <ol style="list-style-type: none"> <li>1. Have child bounce on a springy surface then push up onto tiptoes. (Try saying "bounce, bounce, up")</li> <li>2. Have child bounce up and down on springy surface.</li> <li>3. Have child bounce up and down then try to lift feet off the ground.</li> </ol>

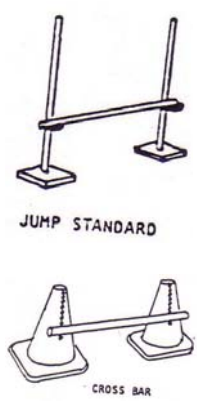
## **JUMPING**

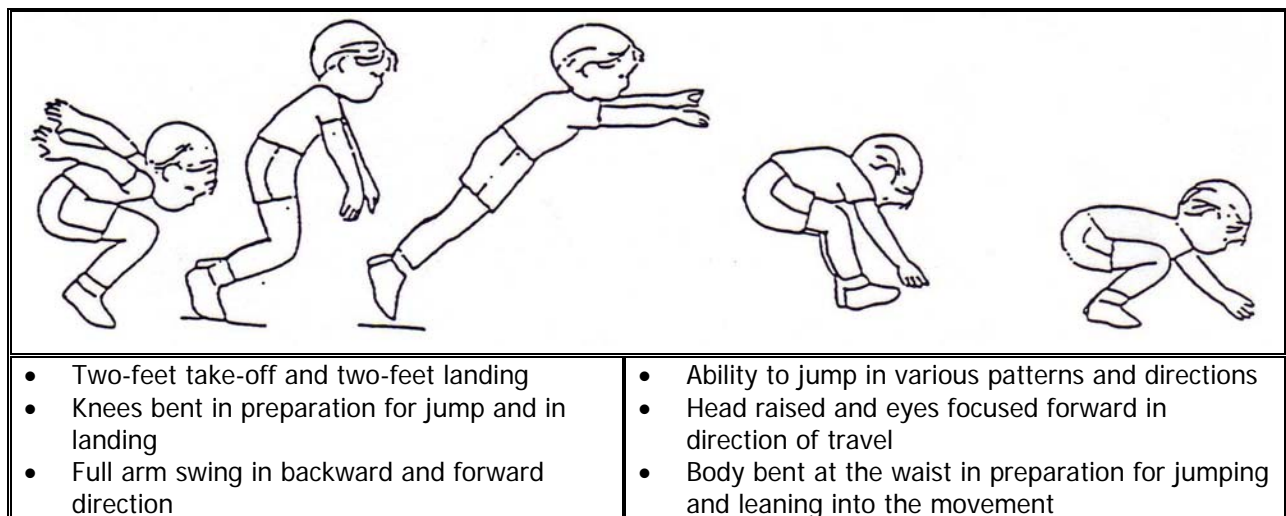
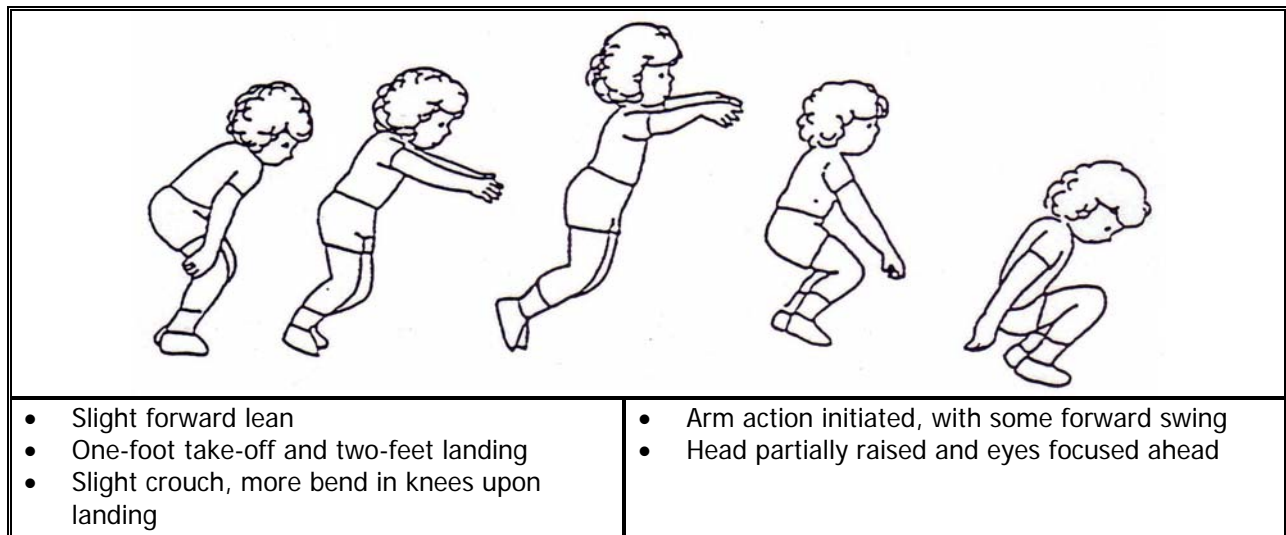
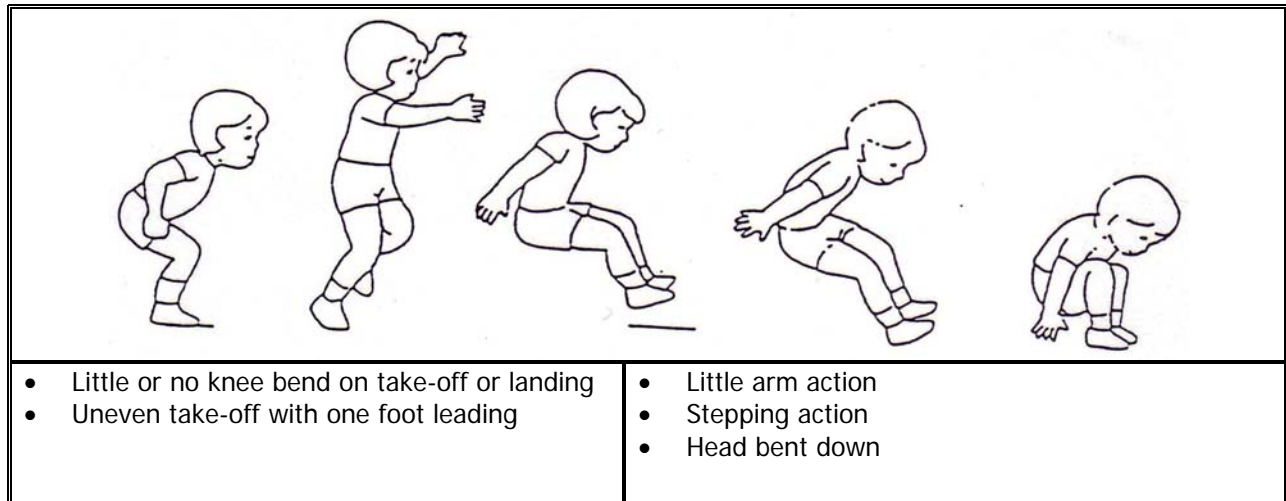
### **Pre-Requisite Skills:**

- Child has good balance when walking.
- Child is able to walk forward and backwards.
- Child should be able to walk on uneven ground (i.e. grass, gravel, sand).
- To be able to lift feet off the ground the child needs to have momentum either from pushing with his/her toes or pulling with his/her arms.

\* Try to Practice these exercises a few times a day. Children generally enjoy jumping so if they don't like these exercises they may be too difficult. Try using most exercises from an easier stage and just a few "tricky" ones.

\* Watch that the child isn't leaning over too much (try to get him/her to stand as straight as possible).

<b>Steps In Learning To Jump</b>	<p>1-A). Bouncing on a springy surface while holding on. Hips and knees bend but feet stay on the ground.</p> <p>1-B). As above without holding on.</p> <p>2-A). Bouncing on a springy surface while holding on. One or both feet come off the ground.</p> <p>2-B). As above without holding on.</p> <p>3-A). Jumping on a springy surface while holding on. One or both feet come off the ground.</p> <p>3-B). As above without holding on.</p> <p>4-A). Jumping on the floor while holding on. One or both feet come off the ground.</p> <p>4-B). As above without holding on.</p> <p>5). Jumping off a 4-8 inch step with both feet together.</p> <p>6). Jumping up and down in succession.</p> <p>7). Jumping 2-3 inches forward.</p>
<b>To Help Teach "Lift Off" Try...</b>   <p>The diagram shows two pieces of equipment. The top one is a 'JUMP STANDARD', which consists of two vertical poles connected by a horizontal bar. The bottom one is a 'CROSS BAR', which consists of two cones connected by a horizontal bar.</p>	<ol style="list-style-type: none"> <li>1. Demonstrating – have the child watch your feet while you do an exaggerated jump.</li> <li>2. Help push down and lift up the child's legs <u>slightly</u> while he/she is holding on and bouncing.</li> <li>3. Holding the child on his/her trunk and help him/her jump up when bouncing. Make sure that he/she does the push off then help them jump up.</li> <li>4. Higher surface to hold on to (i.e. head level) to give more pull from the arms.</li> </ol> <p>Once the child is able to jump on a springy surface (2 feet off the ground), progress to jumping on the floor:</p> <ol style="list-style-type: none"> <li>1. 2 hands held</li> <li>2. Holding onto the couch/table</li> <li>3. 1 hand held</li> <li>4. Independently</li> <li>5. Independently, more than once in a row</li> </ol> <p>*The child may need verbal reminders to lift both feet up.</p> <p>Once the child is able to jump up, start working on jumping forward: Holding hands, help "pull" him/her forward as he/she jumps upward.</p> <ul style="list-style-type: none"> <li>• Try jumping over tape/lines, etc.</li> <li>• Encourage him/her to swing arms as in a long jump style.</li> <li>• Try jumping over a 1 inch rope.</li> <li>• Try jumping 2 to 3 times forward in a row.</li> <li>• Try jumping over a jump stand or cross bar.</li> </ul>



<b>Jumping Down</b>		
[MH: More Help] [LH: Less Help]		
<i>Task Sequence</i>	<i>Physical Prompts</i>	<i>Other teaching Suggestions</i>
1. Step down from shin height one foot to the other foot	MH. Face child, hold both hands and pull so child steps off bench. LH. Pull with one hand, releasing after take-off.	<ul style="list-style-type: none"> <li>• Step down from bench into hoop target on floor, jump board, etc.</li> <li>• Stand behind child holding under shoulders or holding hands around front of child. Give gentle push at shoulders or short pull from hands.</li> <li>• Step down with child, holding his hand and reducing prompt.</li> <li>• Gradually increase height from which child steps down.</li> <li>• Use a small set of stairs for child to step down.</li> </ul>
2. Jump down from shin height with a two-foot take-off and landing.	MH. Face child and hold both hands. Pull downward on hands so that knees bend, then pull up and lift child off bench to floor. Be sure child is momentarily suspended. LH. Manipulate child into slight crouch then hold hands out in front so that child reaches for them as he jumps. Reduce contact time until child touches hands only on landing. Finally, hold out hands but do not allow contact throughout jump.	<ul style="list-style-type: none"> <li>• Jump onto a crash pad, into sand, snow or foam rubber. Move target further away from take-off spot.</li> <li>• Fade prompts by releasing child's hands in air. Decreasing contact time in successive trials.</li> <li>• Encourage child to land low, with knees bent.</li> </ul>
3. Jump down from knee height with two-foot take-off and landing.	LH. Hold hands out in front so that child reaches for them as he jumps. Reduce contact time until child touches hands only on landing.	<ul style="list-style-type: none"> <li>• Gradually increase height of jump.</li> <li>• Say 'Jump to me' and stand back 1 - 1.5 meters.</li> <li>• Jump onto crash pad.</li> <li>• Do a jump, land and roll (or fall) on a crash pad.</li> </ul>
4. Jump down from hip height with a two-foot take-off and landing.	LH. Hold one hand and reduce prompt by releasing child's hands in air. Decreasing contact time in successive trials.	

### Advanced Jumping Activities



- Jumping in a square.
- Jumping up as many times in a row as possible.
- Jumping forward as many times in a row as possible.
- Jumping as far forward as possible.
- Running and jumping.
- Playing hopscotch
- Hopping on 1 foot.
- Jumping forward then backwards.
- Jumping sideways.


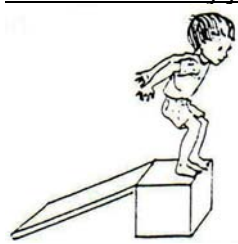
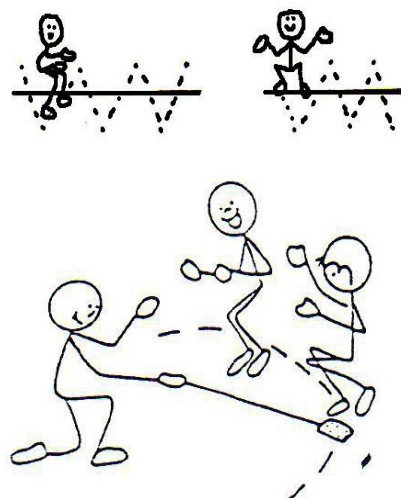
### Other Activities Which Help Develop Jumping



- Fast walking
- Running
- Climbing
- Riding tricycle/bicycle
- Walking up and down stairs
- Walking up and down inclines

## CHALLENGES AND SOLUTION FOR CHILDREN WITH GROSS MOTOR DEVELOPMENTAL DELAY

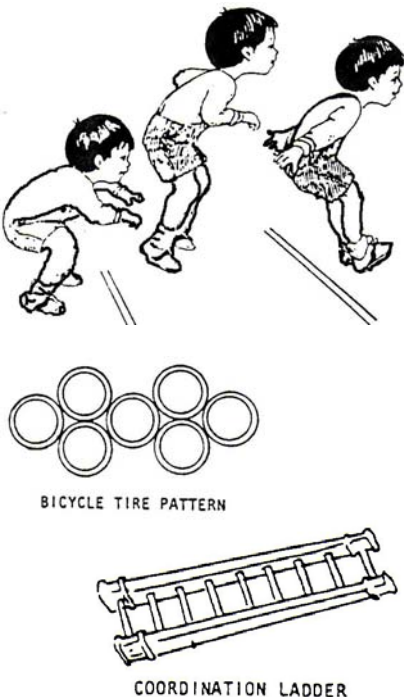

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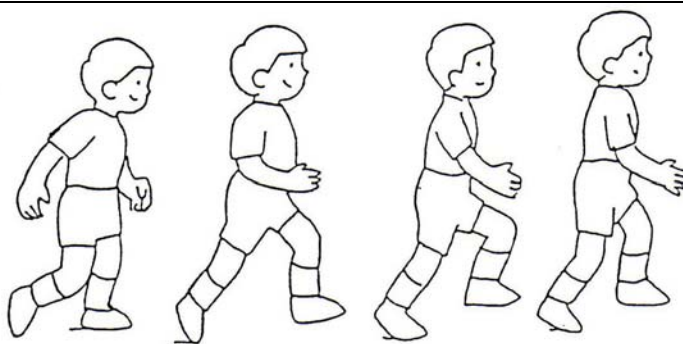
Problems	Solutions
<p><u>Child is unable to jump with both feet.</u></p> 	<ul style="list-style-type: none"> <li>• Pull down on child's hands to encourage child to bend his/her knees. Then ask the child to straighten up quickly.</li> <li>• Progress to having child bend knees and then raise both arms up as he straightens up.</li> <li>• As child straightens up encourage to push off so that he jumps up in the air.</li> <li>• A rebounder/trampoline is useful to give the child the idea of bouncing and jumping.</li> <li>• Practice jumping up, gradually increasing the height the child reaches.</li> </ul>
<p><u>Child has difficulty jumping down.</u></p> 	<ul style="list-style-type: none"> <li>• Start by having child jump down from a low height. You may need to hold his/her hands to start.</li> <li>• Reduce the contact with the child gradually so that the child touches your hands only on landing.</li> <li>• Finally, hold out hands but do not allow contact throughout the jump.</li> <li>• Gradually increase the height from which the child is jumping, using the same procedures of gradually decreasing support.</li> </ul>
<p><u>Child has difficulty jumping rope.</u></p> 	<ul style="list-style-type: none"> <li>• Stretch out a rope in a straight line on the ground. Start at one end of the rope and jump side to side over the rope to the other end.</li> <li>• Also try jumping forward and backwards over the rope. Remember to continue down to the end.</li> <li>• Attach a small weight (1/2 lb) to one end of a rope. Swing the rope around in a circle slowly so that the child can jump over the rope as it passes by. Make sure the rope is not too far off the ground.</li> <li>• Child holds a skipping rope in each hand (making sure that the rope just touches the ground behind the feet). Swing the rope over the head, from back to front, keeping arms out to the side approximately waist high.</li> <li>• Begin by having the child turn the rope once, letting it hit the floor in front and then just step over it.</li> <li>• Progress to having the child jump the rope instead of just stepping over it.</li> <li>• Child can practice jumping the rope by just swinging it from the front to the back without bringing it over the head.</li> </ul>

## HOPPING

### Pre-Requisite Skills:

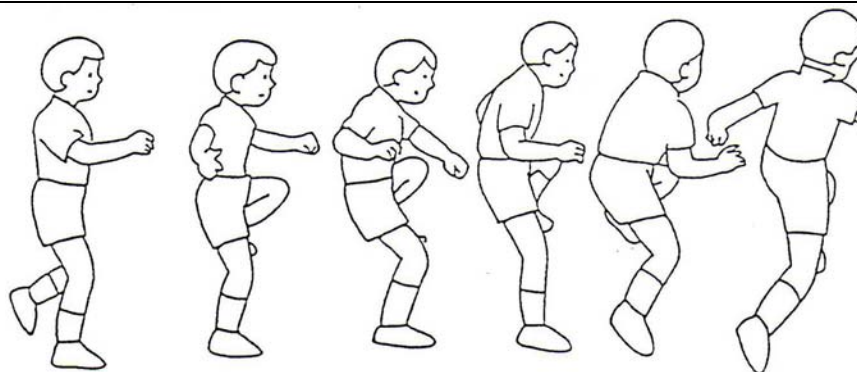
- Child is able to jump forward and backwards on two feet.
- Child is able to bend knees and push off.
- Child can balance on one foot long enough to hop forwards.

Problems	Solutions
<p>Child has difficulty hopping on one foot.</p>  <p>BICYCLE TIRE PATTERN</p> <p>COORDINATION LADDER</p>	<ul style="list-style-type: none"> <li>• Establish foot dominance by watching him kick a ball.</li> <li>• Hold child's hands and instruct him/her to bend their knees then straighten, bouncing without leaving the floor.</li> <li>  </li> <li>• Progress to hopping off the floor.</li> <li>• Progress to one hand support and then without help.</li> <li>• Child might feel more stable by holding one foot with his hand.</li> <li>• Encourage child to hop forward.</li> <li>• Use the same sequence for the non-dominant foot.</li> <li>• Gradually increase height and distance of hopping.</li> </ul>



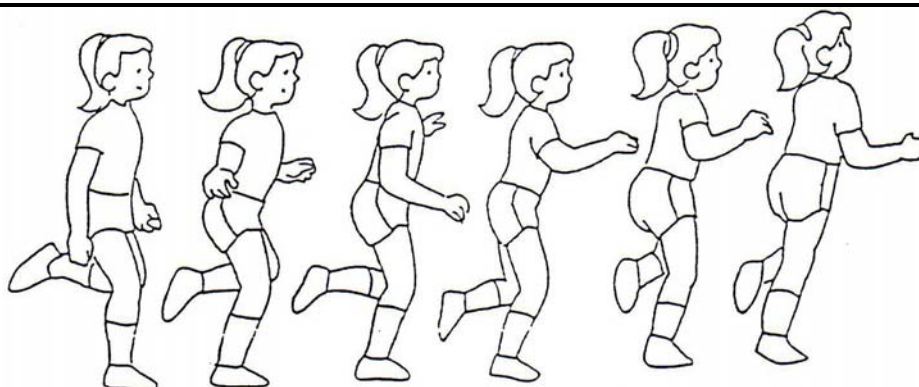
- Flat-footed landing
- Exclusive use of preferred foot
- Few repetitions possible
- Little lift off ground

- Difficulty maintaining balance
- Uncontrolled arm and leg movement (extraneous movement)
- Leg raised in front of the body at 90 degree angle



- Increased body control
- Arms used for balance and lift
- Increased repetitions of rhythmical hopping

- Knee held lower in front of the body at a 45 degree angle
- Slight forward lean



- Arms used for lift
- Consecutive, rhythmical hopping
- Knee held behind the body at a 90 degree angle

- Ability to hop in various patterns and directions