

## RISK ANALYSIS – TRANSTIBIAL TEMPORARY PROSTHESIS

RISK / HAZARD	SAC	CONTROLS	SUPPORTING DOCUMENTATION	RESIDUAL RISK SAC
1. Damage to surgical wound – friction or traction or pressure		<ul style="list-style-type: none"> <li>• Ensure wound sufficiently healed before fitting socket.</li> <li>• Assessment of client sensation on the stump.</li> <li>• Socket cast according to guidelines – correct weight bearing areas, adequate relief areas, correct alignment.</li> <li>• Prosthesis worn with correct number / layers of socks to minimise pistoning. Number of socks modified as appropriate with stump shrinkage.</li> <li>• Instruction to client regarding correct donning procedure, stump shrinkage and monitoring fit during usage.</li> <li>• Suprapatellar cuff positioned correctly to minimise pistoning.</li> <li>• Stump &amp; wound management – massage, oedema control.</li> <li>• Use of products such as spenco gel pads to minimise forces on stump</li> </ul>	<ul style="list-style-type: none"> <li>• Post-operative assessment checklist (Physiotherapy Following Lower Limb Amputation, 2006, p6).</li> <li>• When can the client take their prosthesis home? (Physiotherapy Following Lower Limb Amputation, 2006, p31).</li> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Stump.</li> <li>• Post-operative stump management (Physiotherapy Following Lower Limb Amputation, 2006, p22, 25 &amp; 29).</li> <li>• Amputee Assessment Form (NSWPAR: <a href="http://www.geocities.com/nswpar">www.geocities.com/nswpar</a>)</li> </ul>	
2. Damage to skin from friction / pressure / traction		<ul style="list-style-type: none"> <li>• Ensure wound sufficiently healed before fitting socket.</li> <li>• Assessment of client sensation on the stump.</li> <li>• Socket cast according to guidelines – correct weight bearing areas, adequate relief areas, correct alignment.</li> </ul>	<ul style="list-style-type: none"> <li>• Post-operative assessment checklist (Physiotherapy Following Lower Limb Amputation, 2006, p6).</li> <li>• When can the client take their prosthesis home? (Physiotherapy Following Lower Limb Amputation, 2006, p31).</li> </ul>	

	<ul style="list-style-type: none"> <li>• Prosthesis worn with correct number / layers of socks to minimise pistoning. Number of socks modified as appropriate with stump shrinkage.</li> <li>• Instruction to client regarding correct donning procedure, stump shrinkage and monitoring fit during usage.</li> <li>• Suprapatellar cuff positioned correctly to minimise pistoning.</li> <li>• Stump &amp; wound management – massage, oedema control.</li> <li>• Use of products such as spenco gel pads to minimise forces on stump</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Post-operative stump management (Physiotherapy Following Lower Limb Amputation, 2006, p22, 25 &amp; 29).</li> <li>• Amputee Assessment Form (NSWPAR: <a href="http://www.geocities.com/nswpar">www.geocities.com/nswpar</a>)</li> </ul>	
3. Excessive pressure on soft tissue	<ul style="list-style-type: none"> <li>• Socket cast according to guidelines – correct weight bearing areas, adequate relief areas, correct alignment.</li> <li>• Moulding around popliteal area not too firm, and trimmed / rounded correctly.</li> <li>• Prosthesis donned correctly.</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> </ul>	
4. Excessive pressure on bony prominences	<ul style="list-style-type: none"> <li>• Socket cast according to guidelines – correct weight bearing areas, adequate relief areas, correct alignment.</li> <li>• Prosthesis worn with correct number / layers of socks to minimise pistoning. Number of socks modified as appropriate with stump shrinkage.</li> <li>• Instruction to client regarding correct donning procedure, stump shrinkage and monitoring fit during usage.</li> <li>• Ongoing packing / adjustment of socket interior as stump volume shrinks.</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> </ul>	

		<ul style="list-style-type: none"> <li>• Use of products such as spenco gel pads to minimise forces on stump</li> </ul>		
5. Falls		<ul style="list-style-type: none"> <li>• Prosthesis aligned optimally to assist gait pattern / avoid trips &amp; stumbles</li> <li>• Prosthesis fitted correctly</li> <li>• Appropriate walking aid / assistance provided during practice</li> <li>• Adequate instruction provided to user on safe usage</li> <li>• Appropriate area / surface for practice provided</li> <li>• Selection of componentry (eg SACH or multiaxial foot) appropriate for the client's functional and cognitive abilities</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Specific exercises provided in writing to client.</li> </ul>	
6. Plaster socket materials failure – leading to stump damage or falls.		<ul style="list-style-type: none"> <li>• Socket cast and mounted on basket according to guidelines.</li> <li>• Socket inspected at each treatment session prior to use</li> <li>• Weighing client prior to use. Note – safe operating weight limits of temporary plaster sockets are not known</li> <li>• Reinforcement of plaster sockets with extra plaster or synthetic casting material where client weight or activity levels are high</li> <li>• Strict instructions given to client on care / maintenance of prosthesis during unsupervised use</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Temporary Prosthesis.</li> <li>• List of Weight limits for prosthetic components</li> </ul>	
7. Loosening of grub screws joining components together – leading to		<ul style="list-style-type: none"> <li>• Adequate tightening / not over tightening of all screws prior to use.</li> <li>• Use of Loctite in sealing grub screws.</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006,</li> </ul>	

stump damage or falls.	<ul style="list-style-type: none"> <li>• Visual inspection of prosthesis at each treatment session, prior to use.</li> <li>• Strict instructions given to client on care / maintenance of prosthesis during unsupervised use</li> </ul>	<p>p47).</p> <ul style="list-style-type: none"> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Temporary Prosthesis</li> <li>• Component Inspection Checklist</li> </ul>	
8. Prosthetic components materials failure – leading to stump damage or falls.	<ul style="list-style-type: none"> <li>• Checking weight limits of prosthetic components and weight of client prior to integration into the temporary prosthesis.</li> <li>• Inspection of 2nd hand components prior to integration into the temporary prosthesis.</li> <li>• Visual inspection of prosthesis at each treatment session, prior to use.</li> <li>• Strict instructions given to client on care / maintenance of prosthesis during unsupervised use.</li> </ul>	<ul style="list-style-type: none"> <li>• List of Weight limits for prosthetic components.</li> <li>• Component Inspection Checklist</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Temporary Prosthesis</li> </ul>	
9. Infection / skin breakdown	<ul style="list-style-type: none"> <li>• Instruction provided to client on skin care</li> <li>• Instruction provided to client on care of stump socks</li> <li>• Instruction provided to client on correct fit &amp; monitoring of the temporary prosthesis, including not using it while open wounds are present.</li> </ul>	<ul style="list-style-type: none"> <li>• Brochure: Care of Your Stump</li> <li>• Brochure: Care of Your Stump Socks, Bandages &amp; Shrinkers</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> </ul>	
10. Vascular compromise through inappropriate weight bearing or tightness in popliteal area	<ul style="list-style-type: none"> <li>• Socket manufactured without too much pressure in popliteal area</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making a Below-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p47).</li> </ul>	

## RISK ANALYSIS – TRANSFEMORAL TEMPORARY PROSTHESIS

RISK / HAZARD	SAC	CONTROLS	SUPPORTING DOCUMENTATION	RESIDUAL RISK SAC
1. Damage to surgical wound – friction or traction or pressure		<ul style="list-style-type: none"> <li>• Ensure surgical wound adequately healed before fitting temporary prosthesis.</li> <li>• Assessment of client sensation on the stump.</li> <li>• Socket cast according to guidelines – correct weight bearing areas (Ischial tuberosity), adequate relief areas, correct alignment.</li> <li>• Prosthesis worn with correct number / layers of socks to minimise pistoning and donned correctly with pull-through sock. Number of socks modified as appropriate with stump shrinkage.</li> <li>• Instruction to client regarding correct donning procedure, stump shrinkage and monitoring fit during usage.</li> <li>• Pelvic suspension positioned correctly and securely to minimise pistoning.</li> <li>• Stump &amp; wound management – massage, oedema control.</li> <li>• Use of products such as spenco gel pads to minimise forces on stump</li> </ul>	<ul style="list-style-type: none"> <li>• Post-operative assessment checklist (Physiotherapy Following Lower Limb Amputation, 2006, p6).</li> <li>• When can the client take their prosthesis home? (Physiotherapy Following Lower Limb Amputation, 2006, p31).</li> <li>• Protocol for making an Above-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Stump.</li> <li>• Post-operative stump management (Physiotherapy Following Lower Limb Amputation, 2006, p22, 25 &amp; 29).</li> <li>• Amputee Assessment Form (NSWPAR: <a href="http://www.geocities.com/nswpar">www.geocities.com/nswpar</a>)</li> </ul>	
2. Damage to skin from friction / pressure / traction		<ul style="list-style-type: none"> <li>• Ensure surgical wound adequately healed before fitting temporary prosthesis.</li> <li>• Assessment of client sensation on the stump.</li> <li>• Socket cast according to guidelines – correct weight bearing areas (Ischial tuberosity), adequate relief areas, correct alignment.</li> </ul>	<ul style="list-style-type: none"> <li>• Post-operative assessment checklist (Physiotherapy Following Lower Limb Amputation, 2006, p6).</li> <li>• When can the client take their prosthesis home? (Physiotherapy Following Lower Limb Amputation, 2006, p31).</li> </ul>	

	<p>adequate relief areas, correct alignment.</p> <ul style="list-style-type: none"> <li>• Prosthesis worn with correct number / layers of socks to minimise pistoning and donned correctly with pull-through sock. Number of socks modified as appropriate with stump shrinkage.</li> <li>• Instruction to client regarding correct donning procedure, stump shrinkage and monitoring fit during usage.</li> <li>• Pelvic suspension positioned correctly and securely to minimise pistoning.</li> <li>• Stump &amp; wound management – massage, oedema control.</li> <li>• Use of products such as spenco gel pads to minimise forces on stump</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making an Above-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Stump.</li> <li>• Post-operative stump management (Physiotherapy Following Lower Limb Amputation, 2006, p22, 25 &amp; 29).</li> <li>• Amputee Assessment Form (NSWPAP: <a href="http://www.geocities.com/nswpar">www.geocities.com/nswpar</a>)</li> </ul>	
3. Excessive pressure on soft tissue	<ul style="list-style-type: none"> <li>• Socket cast according to guidelines – correct weight bearing areas (ischial tuberosity), adequate relief areas, correct alignment.</li> <li>• Correctly sized quadrilateral inlet – for adequate weight bearing on ischial tuberosity and minimisation of weight bearing on pubic ramus / formation of adductor roll.</li> <li>• Prosthesis donned correctly with pull-through sock, to minimise formation of adductor roll above medial socket wall, and “gluteal roll” above ischial seat.</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making an Above-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> </ul>	
4. Excessive pressure on bony prominences	<ul style="list-style-type: none"> <li>• Correctly sized quadrilateral inlet – for adequate weight bearing on ischial tuberosity and minimisation of weight bearing on pubic ramus / formation of adductor roll.</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making an Above-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</li> </ul>	

	<ul style="list-style-type: none"> <li>• Socket cast according to guidelines – correct weight bearing areas (ischial tuberosity), adequate relief areas, correct alignment.</li> <li>• Prosthesis worn with correct number / layers of socks to minimise pistoning, and donned correctly with pull-through sock. Number of socks modified as appropriate with stump shrinkage.</li> <li>• Instruction to client regarding correct donning procedure, stump shrinkage and monitoring fit during usage.</li> <li>• Ongoing packing / adjustment of socket interior as stump volume shrinks.</li> <li>• Padding to ischial seat as necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> </ul>	
5. Falls	<ul style="list-style-type: none"> <li>• Prosthesis aligned optimally to assist gait pattern / avoid trips &amp; stumbles</li> <li>• Prosthesis fitted correctly</li> <li>• Appropriate walking aid / assistance provided during practice</li> <li>• Adequate instruction provided to user on safe usage</li> <li>• Appropriate area / surface for practice provided</li> <li>• Selection of componentry (eg knee joint) appropriate for the client’s functional and cognitive abilities.</li> <li>• Knee joint swing / stance controls adjusted appropriately (eg on Otto Bock safety knees 3R-15 &amp; 3R-49</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making an Above-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Specific exercises provided in writing to client.</li> <li>• Otto Bock Modular® Single Axis Knee Joint with Stance Control and Constant Friction – Instructions For Use.</li> </ul>	
6. Plaster socket materials	<ul style="list-style-type: none"> <li>• Socket cast and mounted on basket according to</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making an Above-Knee</li> </ul>	

<p>failure – leading to stump damage or falls.</p>	<p>guidelines.</p> <ul style="list-style-type: none"> <li>• Socket inspected at each treatment session prior to use</li> <li>• Weighing client prior to use. Note – safe operating weight limits of temporary plaster sockets are not known</li> <li>• Reinforcement of plaster sockets with extra plaster or synthetic casting material where client weight or activity levels are high</li> <li>• Strict instructions given to client on care / maintenance of prosthesis during unsupervised use</li> </ul>	<p>Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</p> <ul style="list-style-type: none"> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Temporary Prosthesis.</li> <li>• List of Weight limits for prosthetic components</li> </ul>	
<p>7. Loosening of grub screws joining components together – leading to stump damage or falls.</p>	<ul style="list-style-type: none"> <li>• Adequate tightening / not over tightening of all screws prior to use.</li> <li>• Use of Loctite in sealing grub screws.</li> <li>• Visual inspection of prosthesis at each treatment session, prior to use.</li> <li>• Strict instructions given to client on care / maintenance of prosthesis during unsupervised use</li> </ul>	<ul style="list-style-type: none"> <li>• Protocol for making an Above-Knee Temporary Prosthesis (Physiotherapy Following Lower Limb Amputation, 2006, p57).</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Temporary Prosthesis</li> <li>• Component Inspection Checklist</li> </ul>	
<p>8. Prosthetic components materials failure – leading to stump damage or falls.</p>	<ul style="list-style-type: none"> <li>• Checking weight limits of prosthetic components and weight of client prior to integration into the temporary prosthesis.</li> <li>• Inspection of 2nd hand components prior to integration into the temporary prosthesis, including quadrilateral socket.</li> <li>• Visual inspection of prosthesis at each treatment session, prior to use.</li> </ul>	<ul style="list-style-type: none"> <li>• List of Weight limits for prosthetic components.</li> <li>• Component Inspection Checklist</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> <li>• Brochure: Care of Your Temporary Prosthesis</li> </ul>	

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9. Infection / skin breakdown		<ul style="list-style-type: none"> <li>• Instruction provided to client on skin care</li> <li>• Instruction provided to client on care of stump socks</li> <li>• Instruction provided to client on correct fit &amp; monitoring of the temporary prosthesis, including not using it while open wounds are present.</li> </ul>	<ul style="list-style-type: none"> <li>• Brochure: Care of Your Stump</li> <li>• Brochure: Care of Your Stump Socks, Bandages &amp; Shrinkers</li> <li>• Brochure: Instructions for Use of your Temporary Prosthesis</li> </ul>	