**Lower Limb Assessment Form**

**This should be completed in the following circumstances:**

Presentation of any wound between the knee and ankle (within 2 weeks) or as part of ongoing review of circulation

* Presence of a wound or pressure damage to the foot or heel
* If there is oedema in the leg, either full leg or below knee
* To validate the result of an ABPI following doppler assessment. An ABPI reading shouldn’t be taken in isolation due to potential inaccuracies
* None of the above but to confirm a patient’s arterial status e.g., diabetics or those with symptoms of claudication

This is in line with NICE guidelines (CG179, Pressure Ulcers: Prevention & Management and CG147, Peripheral Arterial Disease: Diagnosis & Management), which states clinicians should be undertaking a lower limb assessment to determine the presence of disease that may impact on: **1.** The patient’s pressure damage prevention management plan or **2.** The patient’s ability to heal.

*The following table sets out the components of a lower limb vascular assessment, its purpose is to identify signs and symptoms of arterial disease, venous disease, and chronic oedema.*

**Assessment for signs & symptoms of Arterial Disease**

Review the patient’s past medical history to determine whether there is arterial disease elsewhere in body, e.g. CVA, MI, stenosis, peripheral arterial disease; or they have risk factors for developing arterial disease, e.g. diabetes, CKD 3, current/previous smoker.

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| **Instructions** | **Rationale** | **Comments** |
| **Assess for intermittent claudication**  Muscle pain or cramping in the calf on mild exertion, e.g. walking, relieved by a short period of rest.  Pain or cramp in the calf or foot when the leg is elevated at rest e.g. in bed. Patient having to hang leg out of bed/sleep in chair to relieve pain. | Patients with peripheral arterial disease will commonly complain of intermittent claudication. Muscle groups distal to (lower than) the arterial obstruction will become painful with a cramp like sensation, usually affecting calves first.  Rest pain caused by chronic arterial occlusion will limit mobility due to the severity of the pain. Sitting and sleeping in a chair at night may relieve discomfort, as gravity will assist the perfusion of blood into the foot.  Consider if the pain is characteristic of intermittent claudication or pain relating to wounds, venous disease, oedema, or other cause e.g. arthritis. |  |
| **Assess for skin necrosis**  Necrotic tissue may be present to toes or ulceration, particularly over pressure areas such as heels, dorsum of feet and metatarsal heads. | Poor tissue nutrition/oxygenation caused by chronic reduction in arterial blood supply results in tissue necrosis. |  |
| **Check capillary refill**  With the patient lying flat, apply pressure to the tip of the big toe for 5 seconds/until it loses colour. On release of pressure, if the patient has good cardiac output and digital perfusion, the refill time should be less than 3 seconds. | A capillary refill time of more than 5 seconds is considered abnormal and indicates poor peripheral perfusion. |  |
| **Assess skin colour** in both limbs with legs dependent.  With patient supine, elevate the leg above the level of the heart and note any colour changes. If it becomes pale within 30 seconds this is indicative of severe chronic arterial insufficiency.  Assess for areas of skin erythema (generally redness in lighter skin tones but may present as darker, lighter or grey/blue/purple in darker skin tones).  Does this blanch on pressure?  How quickly does the colour return? | When ischaemic, the dependant limb becomes red due to the chronic dilatation of the microcirculation distal to the arterial occlusion. Pallor on elevation and dependant rubor is known as a positive Buerger’s sign.  Healthy limbs maintain their colour on elevation  Areas of skin erythema that do not blanch on pressure are likely to have damage to the micro circulation. This will be classed as category 1 pressure damage. |  |
| **Assess skin temperature**  Use the back of your hands to check skin temperature of both limbs – they should be warm and similar in temperature.  Start at the toes and work up the legs, assessing both limbs simultaneously.  Note any changes in temperature and whether there is a gradual or abrupt change. There may be an obvious demarcation in temperature.  Assess for areas of the limb that have either a rise or fall in temperature. | Severe arterial insufficiency will result in a cool limb.  A rise in skin temperature may indicate inflammation and/or infection.  Consider the context e.g. if feet are cool due to the environment or oedema. |  |
| **Assess for motor & sensory neuropathy**  Check sensation - is the limb/foot numb?  Assess ankle movement – check whether patient can flex and extend the foot/toes. | In chronic arterial insufficiency, muscle group function may be reduced by a compromised arterial blood supply. The ability to flex and extend foot may be diminished.  Non ischaemic reasons for poor movement and/or loss of sensation need ruling out such as arthritis, oedema, previous surgery, and lack of use. |  |
| **Assess for any changes in the skin including:**  Hair loss  Scaling  Thickening (atrophy) of the subcutaneous tissue  Thickening of nails/slow nail growth | Poor tissue nutrition/oxygenation caused by chronic reduction in arterial blood supply results in skin changes.  These are not strong indicators of arterial disease on their own. Consider the whole assessment and whether these skin changes are present alongside more significant symptoms of arterial disease. |  |
| **Nurse Signature: Date:** | | |

**Assessment for signs & symptoms of Venous Disease**

The following signs of venous disease have been taken from the CHROSS checker tool [Chross-Checker-tool.pdf (oxfordhealth.nhs.uk)](https://www.oxfordhealth.nhs.uk/wp-content/uploads/2015/08/Chross-Checker-tool.pdf). Venous hypertension causes certain skin changes which, if present, can be used to diagnose venous insufficiency. Early intervention with compression will prevent long term complications such as leg ulceration.

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| **Instructions** | **Rationale** | **Comments** |
| **Tired, achy, or heavy legs** after periods of standing/immobility. | Due to the back flow of blood in venous disease. |  |
| **Spider Veins** – dilated capillaries on the skin that resemble spider legs. Also referred to a telangiectasia or reticular veins. | Occur as a result of mild venous hypertension. |  |
| **Corona Phlebectatica –** this may present as:   * **Ankle Flare** - distension of the small veins of the foot, around the ankle. * **Cups -** cupular-shaped swelling to the plantar arch that disappear with limb elevation. * **Stasis spots -** purple/black coloured areas that disappear when pressed with a finger. | You may see one or a combination of these symptoms.  Chronic venous hypertension results in dilation of the triangular-shaped veins at the plantar arch and burst epidermal capillaries. |  |
| **Varicose Veins** – swollen and enlarged veins that may be lumpy, bulging or twisted in appearance, and blue or purple in colour. | Weak or damaged valves cause back flow of blood, this blood collects in the vein eventually causing it to become swollen and enlarged. |  |
| **Hyperkeratosis** – dry, scaly plaques of skin. | Abnormal thickening of the outer layer of skin due to venous disease. |  |
| **Hyperpigmentation (hemosiderin staining)** – brown or rust discolouration of the skin around the gaiter area of the lower leg. | Venous hypertension results in the leakage of red blood cells into the tissues. Over time these red blood cells break down and produce hemosiderin (an iron-containing pigment) which build up, causing brown deposits in the skin. |  |
| **Varicose Eczema** – inflammatory skin condition of the lower leg. | Incompetent valves result in backflow of blood, causing blood pressure in the limb to increase and leakage of blood and blood products into the surrounding tissue. This triggers an inflammatory response, resulting in skin damage. |  |
| **Atrophie Blanche** – smooth, ivory-white markings in the skin that may be speckled with spider veins. | Due to lack of oxygen and nutrient flow to the area. |  |
| **Induration** – firm, hardened area of tissue with loss of elasticity and pliability. | Associated with the inflammation resulting from chronic venous insufficiency, chronic oedema, or infection. |  |
| **Nurse Signature: Date:** | | |

**Assessment for signs & symptoms of Chronic Oedema**

The following signs of lympho-venous disease have been taken from the CHROSS checker tool [Chross-Checker-tool.pdf (oxfordhealth.nhs.uk)](https://www.oxfordhealth.nhs.uk/wp-content/uploads/2015/08/Chross-Checker-tool.pdf). Chronic oedema (lymphoedema) is not curable and, if diagnosed, will progress without effective management including compression. Please refer to the chronic oedema pathway for guidance. [Chronic-Oedema-Pathway-V7-April2022.pdf (oxfordhealth.nhs.uk)](https://www.oxfordhealth.nhs.uk/wp-content/uploads/2022/01/Chronic-Oedema-Pathway-V7-April2022.pdf)

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| **Instructions** | **Rationale** | **Comments** |
| **Assess for oedema**  Examine limb size, symmetry, and presence of oedema – assess entire leg from toes to thigh.  Press the skin firmly for 5 seconds to identify whether it is pitting.  If oedema is present, has it been present for 3 months or more?  Assess for oedema in the toes by using the thumb and index finger to pinch the skin at the base of the 2nd toe. If the skin can’t be lifted, it indicates a positive stemmer sign. | Oedema which is present for 3 or more months and not resolved by elevation or diuretics is diagnosed as chronic oedema (lymphoedema). The oedema may be soft and pliable or firm and fibrotic in nature.  Pitting oedema may indicate congestive cardiac failure or renal failure – refer to the heart failure and compression therapy pathway for guidance. [Heart-failure-and-compression-therapy-pathway-\_V4-](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.oxfordhealth.nhs.uk%2Fwp-content%2Fuploads%2F2022%2F01%2FHeart-failure-and-compression-therapy-pathway-_V4-131221.docx&wdOrigin=BROWSELINK)  A positive stemmer sign is diagnostic of lymphatic disease. |  |
| **Lipodermatosclerosis** – thickening and hardening of the tissues of the lower leg. Shape appears as an inverted champagne bottle, often with hyperpigmentation present. | Chronic venous insufficiency, resulting in the progressive deposition of fibrin and often damaging the lymphatics. |  |
| **Skin folds** – may be overhanging or pendulous. | The stretching of skin due to the extra fluid present in very swollen limbs. |  |
| **Papillomatosis** – warty growths or cobblestone appearance on the skin. | Due to dilated lymphatics and fibrous tissue. |  |
| **Lymphangiomata –** blisters on the skin | Due to dilated lymphatic capillaries in the dermis. |  |
| **Lymphorrhoea (wet legs)** – leakage of lymph fluid from the skin surface | Caused by extra fluid in very swollen limbs along with compromised skin condition. |  |
| **Cellulitis** – infection of the skin usually visible as unilateral redness/spreading erythema. | Bacterial infection that patients with symptoms of venous disease or oedema are more susceptible to. |  |
| **Nurse Signature: Date:** | | |

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| |  |  | | --- | --- | | **Diagnosis** | **Tick** | | **Arterial** |  | | **Venous** |  | | **Chronic Oedema** |  | | |  | | --- | | **Comments** | |  | |