

Policy Title:	Ankle Brachial Pressure Index Assessment	
Applies To:	Registered Nurses and Licensed Practical Nurses	
Approved:	Effective:	Next Review:
August 28, 2023	October 17, 2023	August 28, 2027
Sponsor:	Senior Director, Interprofessional Practice and Learning	
Approval Authority:	VP Research, Innovation & Discovery, and Chief Nurse Executive	
Number: CL-SW-010	Manual: Interdisciplinary Clinical	

POLICY STATEMENTS

- The Registered Nurse (RN) and Licensed Practical Nurse (LPN) must meet the following competency requirements:
 - Successfully complete the associated learning module - [Measuring Ankle-Brachial Index \(CINAHL Education – Dynamic Health\)](#).
 - Demonstrate the skill to a competent RN/LPN/physician/nurse practitioner or vascular diagnostic technologist as per [Measuring Ankle-Brachial Index Checklist](#) (Dynamic Health).
 - Annual self-assessment of competency through a review of the learning module.
 - Develop a plan to address any identified competency deficits with immediate supervisor.

PRINCIPLES AND VALUES

- An ankle brachial pressure index (ABPI) assessment is a portable, non-invasive and cost-effective tool for screening for peripheral arterial disease (PAD). International best practice guidelines recommend performing an ABPI on people at risk for PAD, as well as those with chronic venous insufficiency and/or venous ulcer. It can be used to identify people at risk of adverse effects caused by compression therapy and aid in the assessment of the healability of lower limb wounds.
- ABPI assessment should not be a standalone test but be part of a comprehensive lower limb assessment to determine the status of a patient’s peripheral circulation.

- When there is an underlying diagnosis of diabetes or if small vessel (microvascular) disease is suspected, it is recommended to carry out a toe brachial pressure index (TBPI) in conjunction with the ABPI to rule out occlusive disease in the forefoot and toes.

PROCEDURE

- Ensure there is a Most Responsible Health Care Provider (MRHCP) order for ABPI.
- The ABPI assessment may be obtained manually or by using an automated device.

Manual Assessment

- Refer to [Measuring Ankle-Brachial Index \(Dynamic Health\)](#) for:
 - Indications, precautions and contraindications of performing an ABPI
 - Supplies
 - Steps to perform an ABPI.
- Advise the MRHCP of the results as per Table 1.

Table 1.

Ankle Brachial Pressure Index Interpretation	
Arterial Flow Grade	Values
Non-compressible: Interpret with caution; may indicate calcified vessels	Greater than 1.40 (Requires further investigation)
Normal arterial flow	1.0-1.40
Borderline arterial flow	0.91-0.99
Mild impairment of arterial flow	0.7 – 0.90
Moderate impairment of arterial flow	0.41 – 0.69
Severe impairment of arterial flow (critical limb ischemia)	0.00 – 0.40

(Wounds Canada, 2020)

- Document results of the ABPI assessment in the patient's health record.

Automated Assessment

- If using an automated device, refer to manufacturer's instructions.
- Advise the MRHCP of the results as per [Table 1](#).
- Document results of the ABPI assessment in the patient's health record.

ABPI Calculation

- Obtain an ABPI on both legs.

2. To obtain an ABPI, divide the highest ankle systolic pressure of each leg by the highest brachial pressure as per the equation below.

$$\frac{\text{Ankle systolic pressure}}{\text{Brachial systolic pressure}} = \text{ABPI}$$

REFERENCES

- Beaumier M., Murray, B., Despatis, M., Patry, J., Murphy, C., Jin, S., & O’Sullivan-Drombolis, D. (2020). Best practice recommendations for the prevention and management of peripheral arterial ulcers. In Foundations of best practice for skin and wound management. A supplement of Wound Care Canada. <https://www.woundscanada.ca/docman/public/health-care-professional/bpr-workshop/1690-wc-bpr-prevention-and-management-of-peripheral-arterial-ulcers-1921e-final/file>
- Dynamic Health. (2023). *Measuring ankle-brachial index*. <https://www.dynahealth.com/nursing-skills/measuring-ankle-brachial-index>
- Houghton, P. (2019). The science behind abpi. *Wound Care Canada*, 17(1), 10-24. <https://www.woundscanada.ca/docman/public/wound-care-canada-magazine/wcc-2019-v17-no1/1403-wcc-spring-2019-v17n1-final-p-10-25-abpi-pdf/file>
- Wounds Canada Institute Faculty. (2019). How to assess blood flowing using an ankle-brachial pressure index (ABPI) assessment. *Wound Care Canada*, 17(1), 22-24. <https://www.woundscanada.ca/docman/public/wound-care-canada-magazine/wcc-2019-v17-no1/1404-wcc-spring-2019-v17n1-final-p-22-24-abpi-how-to-tool-pdf/file>

RELATED DOCUMENTS

[Measuring Ankle-Brachial Index \(CINAHL Education\)](#)

[Cleaning and Disinfection of Non-Critical Reusable Patient Care Equipment - Policy and Procedure - NSHA IPC-CL-001](#)

Forms

[Basic Lower Limb Assessment \(NSBLLA\)](#)

[Advanced Lower Limb Assessment \(NSALLA\)](#)

[Ankle Brachial Pressure Index \(ABPI\) NSABPI](#)

* * *

APPENDIX A: DEFINITIONS

Most Responsible Health Care Provider (MRHCP)	The physician, clinical associate, or nurse practitioner who has responsibility for directing and coordinating the care and management of an individual patient at a specific point in time.
--	--

POLICIES BEING REPLACED

AVH 300.031 Ankle Brachial Index (ABI) & Digital Brachial Index (DBI)

CDHA CC 07-010 Ankle Brachial Pressure Index

CEHHA 312-002: Ankle Brachial Pressure Index

SWNDHA 0-008 Ankle Brachial Pressure Index

VERSION HISTORY

Version:	Effective:	Approved by:	What's changed:
Original	2023-10-17	VP Research, Innovation & Discovery, and Chief Nurse Executive	N/A