

This document summarises information collected in different references.

It is about

- diagnosis of severe arteriopathy
- diagnosis of limb ischemia
- probability of foot ulcer healing
- assessment after revascularisation

Remind 1

For diabetic patients, old patients and patients with a renal failure, it is advised to measure the toe pressure instead of the ankle pressure because of the calcification of the vessel wall at the ankle level that results in an overestimation of the ankle systolic pressure.

Remind 2

Diagnosis of peripheral arterial disease (PAD): $TBI < 0.65$

$TBI = \text{Toe Brachial Index} = \text{Toe systolic pressure} / \text{Arm systolic pressure}$

1. Diagnostic of Critical Limb Ischemia

Critical Limb Ischemia

Acute and Chronic

Springer International Publishing, pp 543-560, Date: 27 October 2016

Endocrine Considerations in Critical Limb Ischemia

DOI: 10.1007/978-3-319-31991-9_49

Ioanna Eleftheriadou, Nicholas Tentolouris, Edward B. Jude

Table 49.1 Diagnosis of CLI in diabetic patients based on hemodynamic tests

Hemodynamic measurements		Interpretation
ABI	>1.30	Medial arterial calcification
	0.91–1.30	Normal
	0.70–0.90	Mild obstruction
	0.40–0.69	Moderate obstruction
	<0.40	CLI
Ankle systolic pressures		
with ischemic rest pain	<50 mmHg	CLI
with ischemic ulceration or gangrene	<70 mmHg	CLI
Toe systolic pressures		
with ischemic rest pain	<30 mmHg	CLI
with ischemic ulceration or gangrene	<50 mmHg	CLI
TcPO ₂	<30–50 mmHg	CLI

CLI critical limb ischemia, ABI ankle-brachial index, TcPO₂ transcutaneous oxygen pressure

2. Diagnostic of severe arteriopathy

Skin Necrosis

Téot, L., Meaume, S., Akita, S., Ennis, W.J., del Marmol, v.
 DOI : 10.1007/978-3-7091-1241-0

Table 35.3 Use of noninvasive vascular tests to predict the presence of underlying severe arteriopathy [22]

Noninvasive vascular testing	Findings	Severe arteriopathy
Pedal pulses	Present	Unlikely
	Absent	Possible ^a
Ankle systolic pressure	>70 mmHg	Unlikely
	With ulcer < 50–70 mmHg	Possible ^a
	Without ulcer, with rest pain <30–50	Likely
Toe systolic pressure	>50 mmHg	Unlikely
	≤50 mmHg	Likely
tcPO ₂	>30 mmHg	Unlikely
	<30 mmHg	Likely

^aProceed with further, noninvasive vascular tests to confirm or rule out severe arteriopathy especially if clinical evolution is poor

3. Wound care for vulnerable feet

Edward Mahoney and Carolyn B. Kelly

A systolic toe pressure greater than 50 mmHg is generally considered normal; an increased risk of amputation and failure to heal is associated with pressures less than 30 mmHg.

4. Probability of foot ulcer healing

Contemporary Management of the Diabetic Foot 1st Edition by Sharad, M.D. Pendsey (Editor), Marvin E. Levin (Foreword), Karel Bakker (Foreword)
 ISBN-10: 9380704070, ISBN-13: 978-9350909485, ASIN: 9350909480

Table 1 Probability of foot ulcer healing

Test	Absolute pressure (mm Hg)	Foot ulcer healing (%)
1. P ankle	≤ 55	Unlikely
	55–90	45
	> 90	85
2. P toe	≤ 30	45
	30–50	75
	≥ 55	95
3. TcPO ₂	≤ 20	Unlikely
	≥ 40	Likely

Abbreviations: P ankle, ankle pressure; P toe, toe pressure; TcPO₂, transcutaneous pressure of oxygen.
 Adapted from International Consensus on the Diabetic Foot by the International Working Group on the Diabetic Foot 1999.

5. Assessing patients after revascularisation

IWGDF guidance on the diagnosis, prognosis and management of peripheral artery disease in patients with foot ulcers in diabetes

R. J. Hinchliffe, J. R. W. Brownrigg, J. Apelqvist, E. J. Boyko, R. Fitridge, J. L. Mills, J. Reekers, C. P. Shearman, R. E. Zierler, N. C. Schaper,
 on behalf of the International Working Group on the Diabetic Foot (IWGDF)

First published: 26 January 2016 Full publication history

DOI: 10.1002/dmrr.2698

The aim of revascularisation is to restore direct flow to at least one the foot arteries, preferably the artery that supplies the anatomical region of the wound, with the aim of achieving a minimum toe pressure ≥ 30 mmHg.