

## The Peripheral Arterial Disease (PAD) Walking Impairment Questionnaire

Overview: Regensteiner et al developed a questionnaire for evaluating walking impairment in patients with peripheral arterial disease (PAD). This can be used to identify patients with significant impairment and to monitor effectiveness of therapeutic interventions. The authors are from the Universities of Colorado and Rochester.

Parameters:

- (1) difficulty walking a distance during the past month
- (2) difficulty walking at a certain speed during the past month
- (3) symptoms associated with walking impairment

Walking Distance	Degree of Difficulty	Points
walking indoors (around the house)	no	3
	some	2
	much	1
	did not do	0
walking 50 feet	no	3
	some	2
	much	1
	did not do	0
walking 150 feet (0.5 blocks)	no	3
	some	2
	much	1
	did not do	0
walking 300 feet (1.0 blocks)	no	3
	some	2
	much	1
	did not do	0
walking 600 feet (2.0 blocks)	no	3
	some	2
	much	1
	did not do	0

walking 900 feet (3.0 blocks)	no	3
	some	2
	much	1
	did not do	0
walking 1500 feet (5.0 blocks) or more	no	3
	some	2
	much	1
	did not do	0

walking distance score =

= (20 \* (points for walking indoors)) + (50 \* (points for walking 50 feet)) + (150 \* (points for walking 150 feet)) + (300 \* (points for walking 300 feet)) + (600 \* (points for walking 600 feet)) + (900 \* (points for walking 900 feet)) + (1500 \* (points for walking 1500 feet))

where: each distance is walked is used as a weighting factor for the points from the degree of difficulty.

fraction of maximal walking distance score = (walking distance score) / 6060

<b>Walking Speed</b>	<b>Degree of Difficulty</b>	<b>Points</b>
walking 1 block slowly? (about 1.5 mph)	no	3
	some	2
	much	1
	did not do	0
walking 1 block at an average speed? (about 2.0 mph)	no	3
	some	2
	much	1
	did not do	0
walking 1 block quickly? (about 3.0 mph)	no	3
	some	2
	much	1
	did not do	0
running or jogging 1 block? (about 5.0 mph)	no	3

	some	2
	much	1
	did not do	0

walking speed score = (1.5 \* (points for walking slowly)) + (2 \* (points for walking at average speed)) + (3 \* (points for walking quickly)) + (5 \* (points for running or jogging))

where: each speed is walked is used as a weighting factor for the points from the degree of difficulty.

fraction of maximal walking speed score = (walking speed score) / 34.5

Symptoms of Walking Impairment	Degree of Difficulty	Points
pain or aching in your calves?	no	3
	slight	2
	some	1
	much	0
pain or aching in your thighs?	no	3
	slight	2
	some	1
	much	0
pain stiffness or aching in your joints (knees or hips)?	no	3
	slight	2
	some	1
	much	0
pain or discomfort in your chest?	no	3
	slight	2
	some	1
	much	0
weakness in one or both of your legs?	no	3
	slight	2
	some	1
	much	0

shortness of breath?	no	3
	slight	2
	some	1
	much	0
heart palpitations?	no	3
	slight	2
	some	1
	much	0
other problems? (please list)	no	3
	slight	2
	some	1
	much	0

where:

- A total symptom score was not calculated. This was the questions "were not a ranked series."
- The data was presented as "a percentage of the maximal score possible of 4.0."

Interpretation:

- minimum walking distance score: 0
- maximum walking distance score: 34.5
- minimum walking speed score: 0
- maximum walking speed score: 6 60
- The score can be used to compare impairment before and after vascular surgery.

Performance:

- Changes in questionnaire scores correlated with some measurements of treadmill performance.
- Retesting in an untreated control group showed similar scores after 12 weeks.

References:

Regensteiner JG Steiner JF et al. Evaluation of walking impairment by questionnaire in patients with peripheral arterial disease. J Vascular Medicine Biology. 1990; 2: 142-152. (Appendix I pages 150-151).