

# Let's work together for better health.

## Microlife WatchBP Professional blood pressure monitors

The professional cardiovascular management solution for better diagnosis of heart diseases and stroke risks



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### **WatchBP**

The professional cardiovascular management solution for better diagnosis of heart diseases and stroke risks

#### Clinical blood pressure measurement has limited accuracy because of:

- Blood pressure variability
- White coat effect / hypertension
- Masked hypertension

#### Therefore, guidelines recommend:

- Ambulatory (24-hour) blood pressure measurement
- Self-measurement of blood pressure at home
- Unattended automated office blood pressure measurement

#### Additional cardiovascular screening is also recommended for:

- Atrial Fibrillation (AF)
- Peripheral arterial disease
  - Ankle Brachial Index (ABI)
  - Inter-Arm Difference (IAD)
- For special patient groups, WatchBP devices are validated and recommended to measure:
  - Children from the age of 3 years
  - Pregnant women with or without pre-eclampsia
  - Patients with end stage renal disease
  - Diabetes patients
  - Very elderly
  - Patients with hypotension
  - Patients with atrial fibrillation

#### Microlife WatchBP presents a solution that makes screening for these important cardiovascular risks easy, fast and accurate.









Protocol Embedded Protocol Embedded

AHA

Protocol Embedded

Recommended by NICE

**AFIB** Detection (Microlife Technology)

### Product overview

#### WatchBP Products

#### **Office Blood Pressure Measurement**



WatchBP Office

WatchBP Office ABI

#### **Ambulatory Blood Pressure Measurement**



#### Self-Measurement of Blood Pressure at Home



WatchBP Home

WatchBP Home A

### Accuracy and validations

#### **Clinically validated blood pressure monitors**

All Microlife WatchBP devices are validated according to the established international protocols.

#### **Clinical devices**

WatchBP Device	Validation	Circumstance	
	BIHS	ESH / ISO-AAMI	Circumstance
Office (2nd generation)		Pass	At rest/ L-XL Size cuff /children >3 year
Office AFIB		Pass	At rest/ L-XL Size cuff /children >3 year
Office ABI	A/A	Pass	At rest/ L-XL Size cuff /children >3 year
Office Central	A/A	Pass	At rest/ L-XL Size cuff /children >3 year

\*All devices are validated for L-XL size cuff and for children from the age of 3 years old.

#### Ambulatory blood pressure monitoring devices

WatchBP Device	Validatior	Circumstance		
	BIHS	ESH / ISO-AAMI	Circumstance	
O3 (2nd generation)		Pass	At rest/ L-XL Size cuff /children >3 year	
O3 Ambulatory		Pass	At rest/ L-XL Size cuff /children >3 year	
O3 AFIB		Pass	At rest/ L-XL Size cuff /children >3 year	

#### Self-measurement devices

WatchBP	Validation			
Device	BIHS	Circumstance		
	A/A	Pass	At Rest	
	A/A		Pregnancy	
Home	B/A		Pre-eclampsia	
			L-XL Size Cuff	
	A/A	Pass	At Rest	
Home A		Pass	L-XL Size Cuff	
Home A BT	A/A	Pass	At Rest	
(Bluetooth)		Pass	L-XL Size Cuff	
Home S		Pass	WatchBP Home Equivalence	

BIHS, British and Irish Hypertension Society; ESH, European Society of Hypertension; AAMI, Association for the Advancement of Medical Instrumentation; ISO, International Organization for Standardization.

### Special patient validations

#### About special patient validations

Because of the technique that is used in automated oscillometric blood pressure monitors, they can be inaccurate when used in so-called special patient groups. This can lead to the fact that a blood pressure monitor that is validated in "regular subjects" may not give accurate readings when used e.g. during pregnancy or when used in children, elderly or diabetes patients. This can have serious clinical consequences.

Therefore, medical standard authorities require that a blood pressure monitor may only be recommended for such a special patient group if it has been validated for this specific group.

Microlife blood pressure monitors have passed many of these challenging validations so that they now may be recommended for almost all special patient groups.

	Stiff arteries						Very low E	3P values		AE		
	ESRD	Diabetes	Elderly	Dialysis	Pre-eclampsia	Pregnancy alone	Hypotension	Children & adolescents	Obesity	Cuff wide-range		
Microlife	•	٠	٠	•	•	•	٠	•	•	٠	•	

\*ESRD, end-stage renal disease; AF, atrial fibrillation



#### Accurate measurement for End Stage Renal Disease

Microlife WatchBP is accurate for patients with end-stage renal disease.

Patients with moderate to severe renal disease have a very high incidence of hypertension, paired with stiff (calcified) arteries. As automated measurements can be influenced by stiff arteries, a special validation is required before blood pressure monitors can be recommended for use among patients with end stage renal disease.

#### Available models:

WatchBP Office WatchBP Office AFIB WatchBP Office ABI WatchBP Office Central WatchBP 03 WatchBP 03 Ambulatory WatchBP 03 AFIB WatchBP Home WatchBP Home A WatchBP Home A BT WatchBP Home S



What is Pre-eclampsia? Pre-eclampsia is defined as new hypertension and substantial proteinuria after 20 weeks gestation. Due to the unpredictable nature of pre-eclampsia, hypertensive women must have their blood pressure measured frequently.

#### Accurate measurement for Pre-eclampsia

WatchBP is accurate for use in pregnancy and pre-eclampsia.



#### Available Models:

WatchBP Office WatchBP Office AFIB WatchBP Office ABI WatchBP Office Central WatchBP O3

WatchBP Home

Most oscillometric blood pressure monitors underestimate blood pressure in pre-eclampsia. For this reason, oscillometric blood pressure monitors may only be recommended for use in pregnancy when specifically tested in this special patient group. The WatchBP Home allows pregnant women to measure their blood pressure at home which could reduce the number of hospital visits and may help to make motherhood safer.

#### Accurate measurement for children

WatchBP devices are validated for blood pressure measurement in children from the age of 3 years old.

#### Available models:

WatchBP Office WatchBP Office AFIB WatchBP Office ABI WatchBP Office Central

WatchBP O3 WatchBP O3 Ambulatory WatchBP 03 AFIB WatchBP Home

Currently, blood pressure measurement is an important part of routine paediatric physical examination. However, as children have a high respiration rate and have difficulties in sitting still, one needs a blood pressure monitor with a highguality algorithm that can filter out these artefacts. In addition, a wide cuff range is needed that covers very small to large arm circumferences. The WatchBP blood pressure monitor has proven to cover all these aspects and therefore can be recommended for children and adolescents aged 3 to 18 years old.



#### Accurate measurement for diabetes patients

WatchBP blood pressure monitors are validated for blood pressure measurement in patients with diabetes.

#### **Available models:**

WatchBP Office WatchBP Office AFIB WatchBP Office ABI WatchBP Office Central WatchBP 03 WatchBP 03 Ambulatory WatchBP O3 AFIB

Patients with Diabetes Mellitus type 1 and 2 may have stiff arteries that can affect the blood pressure measurement. A recent validation study in diabetes patients type 1 and 2 showed that the WatchBP monitor is accurate when used in this patient group.

#### WatchBP Home WatchBP Home A WatchBP Home A BT WatchBP Home S

Early detection of Atrial Fibrillation can reduce the risk of stroke by 68%.



#### What is Atrial Fibrillation (AF)?

AF is the most common sustained cardiac arrhythmia occurring in 5% of the population of 65 years and above and in 14% among those older than 85 years old. AF leads to a 5-fold higher risk of stroke and is responsible for 20% of all strokes. Many people have no symptoms from AF and therefore remain undiagnosed, whereas early treatment can reduce the risk of stroke by up to 68%. 
> in the left atrium Thrombus (clot)

Heart

Stroke due to Atrial Fibrillation

### Early detection and prevention

## WatchBP monitors with Atrial Fibrillation (AF) detection system

WatchBP monitors with implemented AF detection system (AFIB) allow patients to be screened for AF during blood pressure measurement. WatchBP AFIB has consistently proven its accuracy and showed that it leads to increased detection of new patients with AF when used in general clinical practice.

### Early detection of AF followed by adequate treatment can reduce the risk of a stroke by up to 68%



#### Wrist palpation

Wrist palpation, although commonly performed, has a low reliability.



### "WatchBP Home A should be used for hypertension monitoring in primary care"

Tested and approved for detecting Atrial Fibrillation

WatchBP AFIB detects Atrial Fibrillation with high accuracy (sensitivity 98%, specificity 92%) as demonstrated in multiple comparative studies with ECG.



#### **Recommended by NICE**

The National Institute for Health and Care Excellence (NICE) officially recommends using the WatchBP Home A during routine blood pressure measurement for all GPs in the United Kingdom.

www.nice.org.uk/MTG13

WatchBP is the only FDA and MDD cleared oscillometric BPM for atrial fibrillation screening

### Advanced measurement technology

#### Advanced guideline-based measurements

#### The advantages of 3 consecutive measurements

- Superior reliability for blood pressure monitoring.
- Performing three sequential measurements diminishes the influence of an occasional deviating (high) reading.



Guidelines recommend taking at least two blood pressure readings each time and averaging the measurements, for a more reliable result.

#### Efficient screening for Peripheral Arterial Disease (PAD)

# WatchBP monitors with Ankle Brachial Index (ABI) assessment system

WatchBP Office ABI monitors help physicians to diagnose PAD efficiently by performing ankle-arm blood pressure measurements to assess the Ankle Brachial Index. Accurate and easy to use.



#### Peripheral Arterial Disease (PAD)



Ankle Brachial Index is commonly assessed with a Doppler device. This method is time consuming and prone to error.



Fatty substances on the arterial wall

WatchBP Office ABI is easy, fast and accurate for ABI assessment

### What is Peripheral Arterial Disease (PAD)?

PAD is a frequently occurring cardiovascular risk factor that often remains undetected for a long time. In fact, 50% of all patients who have it usually show no symptoms. Patients with PAD have a three-fold higher risk of myocardial infarction, stroke, and death.

### Features overview

#### WatchBP Office

WatchBP	3 Consecutive	Double arm	Auscultatory	AFIB	ABI	PC	Bluetooth®	Central BP	S	pecial patie	ent validation	IS	AOBPM *
Device	measurements	measurement	mode	detection	assessment	link	connectivity	measurement	End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children	(sprint algorithm)
Office (2nd Generation)	•		•	0		•	•	0	•	•	•	•	•
Office AFIB	•	٠	•	٠		٠			•	•	٠	٠	٠
Office ABI	•	•		٠	٠	٠			•	•	٠	•	٠
Office Central	•	•		•	•	•		•	•	•	•	•	

◎ Optional;

\* Automated Office Blood Pressure Measurement

#### WatchBP O3 Ambulatory

WatchBP Device	24-hour ambulatory BP monitoring	AFIB	Central BP	PC link	Bluetooth <sup>®</sup> connectivity	Night-time measurement	Pill-button	Special patient validations			
		deteotion	measurement					End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children
O3 (2nd Generation)	•	0	0	•	٠	•	•	•	•	•	•
O3 Ambulatory	•			•		٠	•	•	•	٠	•
O3 AFIB	•	٠		•		•	•	•	•	•	•

⊚ Optional;

#### WatchBP Home

WatchBP Device	Single	3 Consecutive	AFIB	ESH/AHA/	PC link	Special patient validations				
	measurement	measurements	detection	BIHS Guidelines embedded		End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia		
Home	•			•	٠	•	٠	•		
Home A		٠	•	٠	٠	٠	٠			
Home A BT (Bluetooth)		٠	•	٠	٠	•	٠			
Home S		٠	٠			٠	•			

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