Be part of the great movement to prevent stroke and heart disease

Let’s work together for better health

Microlife WatchBP
Professional Blood Pressure Monitors

www.watchbp.co.uk
Clinical blood pressure measurement has limited accuracy because of:

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

Therefore guidelines also recommend:

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

Additional cardiovascular screening is recommended for:

- Peripheral arterial disease
  - ankle brachial index (ABI)
  - inter-arm difference (IAD)
- Atrial fibrillation (AF)

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

Ambulatory blood pressure measurement

Office blood pressure measurement

Self-measurement of blood pressure at home

High Accuracy and Clinically Validated

All Microlife devices have passed BHS & ESH validation protocols

Clinical devices

<table>
<thead>
<tr>
<th>WatchBP device</th>
<th>Validation protocol</th>
<th>Circumstance</th>
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<tbody>
<tr>
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<td>Office ANBP</td>
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<td>At rest</td>
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Ambulatory blood pressure monitoring devices

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Self-measurement devices

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<th>Circumstance</th>
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<tr>
<td>Home A</td>
<td>A/A</td>
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<td>Pass</td>
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</table>

See also References at P33

Accuracy of Blood Pressure Monitors

Over the past 10 years Microlife devices have passed more than 20 validations according to both the BHS and ESH protocols. These include validations for special patient groups such as patients with high blood pressure during pregnancy (pre-eclampsia), end stage renal disease and for those with obesity.
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.

Microlife provides validated blood pressure monitors for patients with end stage renal disease

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.

Microlife WatchBP Home is accurate for use in pregnancy and Pre-eclampsia

Most oscilometric blood pressure monitors underestimate blood pressure in pre-eclampsia. For this reason, oscilometric 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.

Peripheral Arterial Disease

Peripheral Arterial Disease (PAD) is an important, frequently occurring, cardiovascular risk factor that often remains undetected for too long. Patients with PAD have a three-fold higher risk of myocardial infarction, stroke and death. A recommended test for diagnosing PAD is performing ankle-arm measurements to assess the ankle brachial index (ABI). In general clinical practice ABI is often determined with a Doppler device. However, this method is time consuming and requires skills from the observer and therefore is not performed as well and as frequently as it should.

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

Guidelines recommend taking at least two blood pressure readings each time and average the 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.

3 consecutive measurements

If one of the measurements is questionable, a fourth one is automatically taken.

Peripheral Arterial Disease

50% of all patients have no symptoms

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

Microlife provides validated blood pressure monitors for patients with end stage renal disease

Most oscilometric blood pressure monitors underestimate blood pressure in pre-eclampsia. For this reason, oscilometric blood pressure monitors may only be recommended for use among patients with end stage renal disease.
Early detection of atrial fibrillation can reduce the risk of stroke by 68%

WatchBP monitors with atrial fibrillation (AF) detection system

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

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. AFIB leads to a 5-fold higher risk of stroke and is responsible for 20% of all strokes. Many people have no symptoms from AFIB and therefore remain undiagnosed, whereas early treatment can reduce the risk of stroke by 68%.

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

NICE medical technologies guidance addresses WatchBP Home A: “The available evidence suggests that the device reliably detects atrial fibrillation and may increase the rate of detection when used in primary care.”

“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 97-100% - specificity 89%) as demonstrated in multiple comparative studies with ECG.
WatchBP Office

Microlife WatchBP Office, guidelines based professional blood pressure monitors

- ABI assessment
  Fast, easy and reliable simultaneous ankle-arm blood pressure measurement for screening of peripheral arterial disease.

- Double arm measurement
  Unique dual-cuff design for assessing inter-arm blood pressure differences.

- Auscultatory mode
  For use in e.g. elderly, obese and those with arrhythmia.

- Central blood pressure measurement
  Non-invasive, reliable method based on brachial pulse volume plethysmography (PVP) waveforms.

- AFIB detection (Microlife Technology)
  Screens for atrial fibrillation during blood pressure measurement.

- PC link
  Transmit all measurement data to PC via USB connection.

- 3 consecutive measurements
  For accurate blood pressure measurement and better AF detection.

- WatchBP Office ABI
  Cardiovascular Screening Device, Dual-cuff blood pressure monitor with Ankle-Brachial Index function.

- WatchBP Office AFIB
  Dual-cuff blood pressure monitor with atrial fibrillation detection and auscultatory measurement function.

- WatchBP Office Central
  Cardiovascular Screening Solution, Dual-cuff blood pressure monitor with atrial fibrillation detection, Ankle-Brachial Index assessment and central blood pressure measurement function.

- WatchBP Office Target
  Blood pressure monitor with built-in blood pressure targets.
The most reliable tool for determining inter-arm blood pressure differences

Inter-arm difference (IAD) in blood pressure is an important cardiovascular risk predictor. Therefore, blood pressure must be measured in both arms at the first clinical visit.

WatchBP AFIB detects atrial fibrillation with high accuracy (sensitivity 97-100% - specificity 89%) as demonstrated in multiple comparative studies with ECG.

- Atrial fibrillation (AF) detection.
- Dual-cuff design for simultaneous measurement on both arms to assess the Inter-Arm Difference (IAD).
- Auscultatory mode, for use in e.g. elderly, obese and those with arrhythmia.
- Software CD included, and can also be downloaded from the website: www.watchbp.co.uk

Atrial fibrillation detection

Operation Mode:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Measurements</th>
<th>Interval Time</th>
<th>AFIB detection</th>
<th>Double arm measurement</th>
<th>PC link</th>
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Ankle brachial index assessment: screening for peripheral arterial disease

Presentation of the measurement results

On the device

On the PC

Operation Mode:

<table>
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<tr>
<th>Mode</th>
<th>Measurements</th>
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<th>ABI assessment</th>
<th>AFIB detection</th>
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Central blood pressure

Central blood pressure is the pressure in the aorta, the largest artery that originates from the heart. Central blood pressure measurement may better correlate with cardiovascular risk than upper arm blood pressure measurement because the aorta is more close to the heart and brain, the most vital organs of the body.

The WatchBP Office Central has surpassed all requirements of the international standards

The aorta distributes oxygenated blood to all parts of the body.

Central blood pressure measurement

Central blood pressure is the pressure in the aorta, the largest artery that originates from the heart. Central blood pressure measurement may better correlate with cardiovascular risk than upper arm blood pressure measurement because the aorta is more close to the heart and brain, the most vital organs of the body.

The WatchBP Office Central has surpassed all requirements of the international standards

The aorta distributes oxygenated blood to all parts of the body.

Operation Mode:

<table>
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<tr>
<th>Mode</th>
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<th>Double arm measurement</th>
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</table>
√ Built-in blood pressure targets at 140/90 mmHg for routine measurements; and 130/80 mmHg for high risk patients.
√ Display with colour for patient education.
√ Calculated difference from target value.
WatchBP O3 Ambulatory

Professional 24-hour blood pressure monitor

- Highly affordable.
- Fully-programmable.
- Lightweight and compact.
- Pill intake recording button.
- PC connectivity via USB.
- Software CD included, and can also be downloaded from the website: www.watchbp.co.uk
- Reports provided in PDF, Excel (or Open Office) with automated comment.
- Atrial fibrillation detection (optionally).

Available Models:

<table>
<thead>
<tr>
<th>Model</th>
<th>24-hour ambulatory blood pressure monitor</th>
<th>AFIB detection</th>
<th>PC link</th>
<th>Night-time measurement</th>
<th>Pill-button</th>
<th>For use in End-stage renal disease</th>
<th>For use in pregnancy</th>
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WatchBP O3 validated ambulatory blood pressure monitor

Easy to read one page PDF report

Pill-button for recording medication intake
WatchBP Home

For the best self-measurement of blood pressure at home

WatchBP Home
Monitoring hypertension and suitable for use in pregnancy and pre-eclampsia.

WatchBP Home A
Monitoring hypertension and atrial fibrillation.

WatchBP Home A BT
Bluetooth-enabled blood pressure monitor for detecting a major stroke risk factor.

WatchBP Home A NFC
NFC-enabled blood pressure monitor for detecting a major stroke risk factor.

WatchBP Home N
Helps to collect accurate day and night blood pressure measurements for a good overview of the daily blood pressure pattern.

WatchBP Home S
Simultaneously screening for hypertension and atrial fibrillation at home. Animated reminder to warn for risk factors.
**WatchBP Home**

**Diagnostic mode**
7-day self-measurement program that strictly follows ESH/AHA/BHS guidelines.

**Usual mode**
For single measurement at any time (250 memory).

**Microlife WatchBP Home, also accurate for use in pregnancy and pre-eclampsia**

**WatchBP Home A**

**Usual mode**
(with AFIB detection)
3 consecutive measurements for screening for AF (250 memory).

**Diagnostic mode**
(with AFIB detection)
7-day self-measurement program that strictly follows ESH/AHA/BHS guidelines.

**WatchBP Analyzer Home A**

**Diagnostic mode**
(with AFIB detection)
3 consecutive measurements for screening for AF (250 memory).
WatchBP Home A BT (Bluetooth)

**Usual mode**
(with AFIB detection)
3 consecutive measurements for screening for AF (250 memory).

**Diagnostic mode**
(with AFIB detection)
7-day self-measurement program that strictly follows ESH/AHA/BHS guidelines.

**How does a connected health solution work?**

- Blood pressure measurements and AF screening are performed.
- Results are transferred to a smartphone, PC or Hub.
- From the device the data are transmitted to the cloud.
- The healthcare professional receives the data.

By Microlife

WatchBP Analyzer Home A BT

**Usual mode**
(with AFIB detection)
3 consecutive measurements for screening for AF (250 memory).

**Diagnostic mode**
(with AFIB detection)
7-day self-measurement program that strictly follows ESH/AHA/BHS guidelines.

**How does a connected health solution work?**

- Blood pressure measurements and AF screening are performed.
- Results are transferred to a smartphone, PC or Hub.
- From the device the data are transmitted to the cloud.
- The healthcare professional receives the data.

By Microlife

WatchBP Home A NFC

**Usual mode**
(with AFIB detection)
3 consecutive measurements for screening for AF (250 memory).

**Diagnostic mode**
(with AFIB detection)
7-day self-measurement program that strictly follows ESH/AHA/BHS guidelines.

**How does a connected health solution work?**

- Blood pressure measurements and AF screening are performed.
- NFC reader or barcode scanner with NFC function
- From the device the data are transmitted to the cloud.
- The healthcare professional receives the data.

By Microlife

By Health care provider

By Health care provider
Measuring blood pressure and screening for atrial fibrillation at the same time. Easy, reliable and affordable automated blood pressure measurement device. With "Going-to-doctor" alert to inform a doctor’s visit is required because of atrial fibrillation or persistent high blood pressure values.

**WatchBP Home N**
- For monitoring blood pressure during sleep.
- **Usual mode** (with AFIB detection)
  - 3 consecutive measurements for screening for AF (250 memory).
- **Diagnostic mode** (with AFIB detection)
  - 7-day self-measurement program that strictly follows ESH/AHA/BHS guidelines.

**WatchBP Home S**
- Home blood pressure monitor with atrial fibrillation detection function
  - Measuring blood pressure and screening for atrial fibrillation at the same time.
  - Easy, reliable and affordable automated blood pressure measurement device.
  - With "Going-to-doctor" alert to inform a doctor’s visit is required because of atrial fibrillation or persistent high blood pressure values.

*Going-to-doctor* symbol
Cuffs, as important as the blood pressure monitor

Using the wrong size cuff is a major cause for erroneous blood pressure measurement.

**Soft Upper Arm**

*WatchBP Office* (Washable cuffs available in both nylon and cotton)

- S
- M
- L
- L-XL

*WatchBP 03 Ambulatory* (Washable cuffs available in both nylon and cotton)

- S
- M
- L
- L-XL

*WatchBP Home*

- S
- M
- L
- L-XL

*WatchBP Cuffs*

- Tube with cuff connector
- 50cm tube with cuff connector
- 100cm tube with cuff connector

**Soft Ankle**

*WatchBP Office ABl/ Central*

- M
- L

*WatchBP Office *

- Cuff connector
- 170cm tube with cuff connector
- 100cm tube with cuff connector

**Upper Arm - Rigid**

*WatchBP Office *

- M-L

- Cuff connector

<table>
<thead>
<tr>
<th>Cuff</th>
<th>Upper arm cuff</th>
<th>Ankle cuff</th>
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<tbody>
<tr>
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<tr>
<td>Measures (inches)</td>
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<td>8.7-12.6</td>
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</table>

* the L-XL cuff has been validated for use among patients with large arms.

All cuff bladders are both latex and PVC free.
## WatchBP features overview

### WatchBP Office

<table>
<thead>
<tr>
<th>Device</th>
<th>3 consecutive measurements</th>
<th>Double arm measurement</th>
<th>Auscultatory mode</th>
<th>AHI detection</th>
<th>AHI measurement</th>
<th>PC link</th>
<th>Control BP measurement</th>
<th>For use in End Stage Renal Disease</th>
<th>For use in Pregnancy</th>
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### WatchBP 03

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<tr>
<th>Device</th>
<th>24-hour ambulatory BP monitoring</th>
<th>AHI detection</th>
<th>PC link</th>
<th>Nighttime measurement</th>
<th>PillBox</th>
<th>For use in End Stage Renal Disease</th>
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### WatchBP Home

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<tr>
<th>Device</th>
<th>Single measurement</th>
<th>3 consecutive measurements</th>
<th>ECG/HRV/HRV pulsatility embedded</th>
<th>AHI detection</th>
<th>PC link</th>
<th>Nighttime measurement</th>
<th>PillBox</th>
<th>For use in End Stage Renal Disease</th>
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References

Blood pressure monitors


For more information, please visit: www.watchbp.co.uk

Microlife Corporation is a global corporation working closely with medical societies, specialists and primary care physicians to create tools and solutions that advance healthcare for the benefit of both physicians and patients.