

prolife

ANEROID BLOOD PRESSURE KIT

Prolife Professional



en

Instruction manual


CONTENTS

1	Introduction	3
1.1	Features of the Aneroid Blood Pressure Kit Prolife Professional.....	3
1.2	Important information about self-measurement.....	3
2	List of symbols.....	3
3	Important information on the subject of blood pressure and its measurement.....	4
3.1	How does high/low blood pressure arise?.....	4
3.2	Which values are normal?	4
3.3	What should you do if high or low pressure is regularly detected?....	5
4	The components of the blood pressure monitor	6
5	Measurement	7
5.1	Before the measurement	7
5.2	Common sources of error	7
5.3	Fitting the cuff.....	8
5.4	Measuring procedure	9
5.4.1	Connecting the stethoscope tube to the chest piece.....	9
5.4.2	Cuff inflation.....	9
5.4.3	Systolic blood pressure measurement	10
5.4.4	Diastolic blood pressure measurement	10
5.4.5	Record of measurements	10
6	Troubleshooting	11
7	Care and maintenance.....	12
8	Technical specifications.....	12
9	Safety	13
10	Certification	14
11	Warranty	14

1 INTRODUCTION

1.1. Features of the Prolife Professional

Thank you for purchasing the Aneroid Blood Pressure Kit **Prolife Professional**. The Aneroid Blood Pressure Kit **Prolife Professional** is a manual upper arm blood pressure monitor. This device is intended for use in medical institutions such as hospitals, clinics and medical offices, including self-use at home. This device features excellent performance characteristics and favorable price. With its state-of-the-art, non-stop needle valve mechanism and ergonomic bulb, the Aneroid Blood Pressure Kit **Prolife Professional** provides you with accurate and reliable measurements. A wear-proof cuff and durable materials ensure the reliability of the blood pressure monitor. For ease of transportation, the device can be stored in a nylon zipper bag.

 Please read this instruction manual carefully and keep it in a safe place.

For further questions on the subject of blood pressure and its measurement, please contact your doctor.

WARNING **SAFETY INFORMATION**

1.2. Important information about self-measurement

Do not forget: self-measurement means control, not diagnosis or treatment. Unusual values must always be discussed with your doctor. Under no circumstances should you alter the dosages of any drugs prescribed by your doctor.

2 LIST OF SYMBOLS

Symbols Meaning



Manufacturer.



Authorized Representative in the EU.



Read the instruction manual carefully before use.



Note/Warning.

The product complies With the Medical Devices Directive 93/42/EEC.

3 IMPORTANT INFORMATION ON THE SUBJECT OF BLOOD PRESSURE AND ITS MEASUREMENT

3.1. How does high/low blood pressure arise?

The level of blood pressure is determined in a part of the brain, the so-called circulatory center, and adapted to the respective situation by way of feedback via the nervous system. To adjust the blood pressure, the strength and frequency of the heart (Pulse), as well as the width of circulatory blood vessels is altered. The latter is effected by way of fine muscles in the blood-vessel walls. The level of arterial blood pressure changes periodically during the heart activity: during the «blood ejection» (Systole) the value is maximal (systolic blood pressure value), at the end of the heart's «rest period» (Diastole) the value is minimal (diastolic blood pressure value). The blood pressure values must lie within certain normal ranges in order to prevent particular diseases.

3.2. Which values are normal?

Blood pressure is too high if at rest the diastolic pressure is above 90 mm Hg and/or the systolic blood pressure is over 140 mm Hg. In this case, please consult your doctor immediately. Long-term values at this level endanger your health due to the associated advancing damage to the blood vessels in your body.

With blood pressure values that are too low, i.e. systolic values under 90 mm Hg and/or diastolic values under 60 mm Hg, likewise, please consult your doctor. Even with normal blood pressure values, a regular self-check with your blood pressure monitor is recommended. In this way you can detect possible changes in your values early and react appropriately.

If you are undergoing medical treatment to control your blood pressure, please keep a record of your blood pressure level by carrying out regular self-measurements at specific times of the day. Show these values to your doctor. Never use the results of your measurements to alter independently the drug doses prescribed by your doctor.

Table for classifying blood pressure values (unit: mm Hg) according to the World Health Organization:

Range	Systolic blood pressure	Diastolic blood pressure	Recommendations
Hypotension	<100	<60	Consult your doctor
Blood pressure optimum	100–120	60–80	Self-check
Blood pressure normal	120–130	80–85	Self-check
Blood pressure slightly high	130–140	85–90	Consult your doctor
Blood pressure too high	140–160	90–100	Seek medical advice
Blood pressure far too high	160–180	100–110	Seek medical advice
Blood pressure dangerously high	≥180	≥110	Urgently seek medical advice!

Further information

If your values are mostly standard under resting conditions, but exceptionally high under conditions of physical or psychological stress, it is possible that you are suffering from so-called «labile hypertension». Please consult your doctor if you suspect that this might be the case.

3.3. What should you do if high or low pressure is regularly detected?

- Consult your doctor.
- The increased blood pressure (various forms of hypertension) observed over a period of time is associated with substantial health risks. The increased pressure has a negative effect on blood vessels which may be damaged due to deposits in their walls (atherosclerosis). This may cause inadequate blood supply to major organs (heart, brain, muscles). In addition, heart structure problems occur.

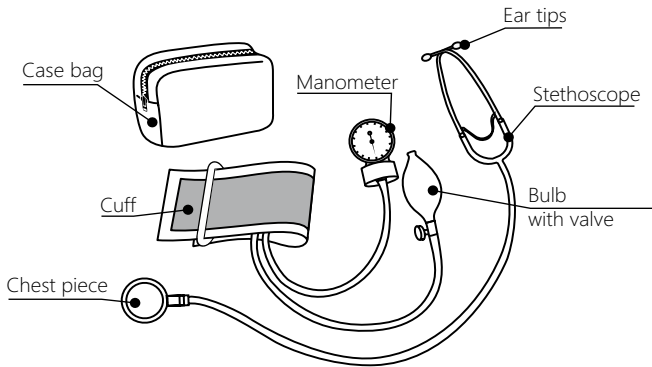
- c. There are a variety of reasons for increased blood pressure. There are essential (the most frequent) hypertension and secondary hypertension. Secondary hypertension is caused by disorder of certain organs. Consult your doctor for possible reasons of high blood pressure.
- d. Make some lifestyle changes to prevent and reduce high blood pressure. These changes should be part of your lifestyle, and they include:
1. **Eating habits.**
 - Try to maintain a normal weight appropriate for your age. Lose excess weight!
 - Avoid the excessive salt intake.
 - Avoid fatty food intake.
 2. **Existing diseases.**

Treat the existing diseases consistently following your doctor's directions:

 - Diabetes mellitus.
 - Impaired fat metabolism.
 - Gout.
 3. **Habits.**
 - Quit smoking completely.
 - Limit alcohol consumption.
 4. **Physical state of the body.**
 - Do sports regularly after having passed a medical examination.
 - Perform endurance exercises and avoid strength sports.
 - Do not exhaust yourself with training.
 - If you have any illnesses and/or if you are over 40, consult your doctor before doing sports. He/she will help you to develop an individual exercise program.

4 THE COMPONENTS OF THE BLOOD PRESSURE MONITOR

Below it is drawn the manual blood pressure monitor, consisting of such parts as:



5 MEASUREMENT

5.1. Before the measurement

- Avoid eating, smoking as well as all forms of exertion immediately before the measurement. All these factors influence the measurement results. Find some time to relax by sitting in an armchair in a quite atmosphere for about ten minutes before the measurement.
- Remove any clothes from your left arm. Do not roll up the sleeve as it will squeeze your arm and this will lead to inaccurate measurement results.
- Measure always on the same arm (normally left).
- Attempt to carry out the measurements regularly at the same time of day, since the blood pressure changes during the course of the day.

5.2. Common sources of error

! NOTE

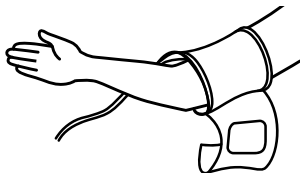
Comparable blood pressure measurements always require the same conditions! These are normally always quiet conditions.

- All efforts by the patient to support the arm can increase the blood pressure. Make sure you are in a comfortable, relaxed position and do not activate any of the muscles in the measurement arm during the measurement.

- Make sure that the point of the air tube entry in the cuff is located above the cubital fossa and is at the level of the heart. If this point is 15 cm above the level of the heart, the measured systolic pressure will be about 10 mm Hg lower than the true value and vice versa.
- Use only the original cuff.
- A loose or improperly fitted cuff causes false measurement values.

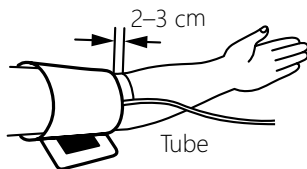
5.3. Fitting the cuff

- a. Wrap the cuff around your arm so that the tube is directed from the bottom upwards.

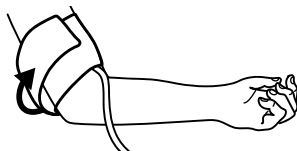


- b. Apply the cuff to the arm as shown in the figure.

Make sure that the bottom edge of the cuff is approximately 2–3 cm above the elbow and that the tube is on the inside of your arm.

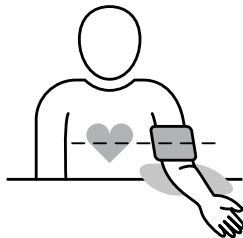


- c. Tighten the loose end of the cuff and secure it with the Velcro fastener.



- d. The cuff should be fixed on the upper arm not too tightly. Remove any clothes from your arm (for example, sweater).

- e. Lay the arm on a table, with the palm upwards, so that the cuff is located at the heart level. Avoid twisting the tube.



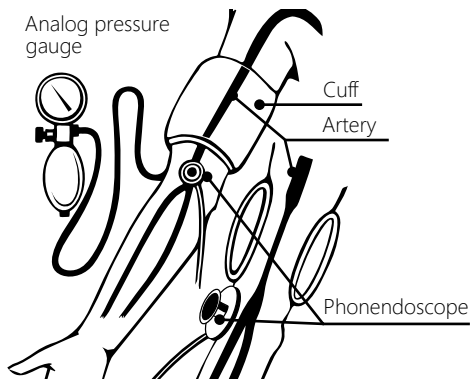
NOTE

The cuff can be put on the right arm as well. In this case, all measurements must be made on the same arm.

5.4. Measuring procedure

5.4.1. Connecting the stethoscope tube to the chest piece

Do not place the chest piece on/in the cuff. The chest piece should be placed either under the cuff or 1–2 cm below the cuff. The chest piece is placed properly when the Korotkoff sounds are loud. Make sure the chest piece is in contact with skin and placed over the brachial artery. Insert the ear tips correctly to check the Korotkoff sounds during the measurement. Before using the stethoscope, make sure that there are no cracks in the membrane, ear tips or the tube. Wrong position or damage of the stethoscope will result in sound distortion or poor sound transmission, leading to inaccurate measurements.



5.4.2. Cuff inflation

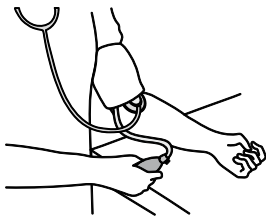
Close the air valve of the rubber bulb by turning the screw clockwise. Do not overtighten. Squeeze the rubber bulb in your hand evenly until the manometer pointer exceeds your normal systolic pressure by 30 mm Hg. If you are not sure of this value, first inflate the cuff to a pressure level of 200 mm Hg.



5.4.3. Systolic blood pressure measurement

Slowly open the air valve by turning the screw counterclockwise and hold the working part of the stethoscope over the brachial artery. To obtain accurate readings, the correct rate of air release from the cuff is required. The air should be released at a rate of 2–3 mm Hg/s, or reducing the pressure by one or two scale divisions with every heartbeat.

Do not remain the cuff inflated longer than required. When the cuff starts to deflate, you must listen carefully to the sounds through a stethoscope. Bear in mind the manometer readings as you hear a clear, rhythmic knock or beat. This is the systolic blood pressure value. Listen carefully to the heartbeat sounds (Korotkoff).



5.4.4. Diastolic blood pressure measurement

Allow pressure to drop at the same air release rate. When the diastolic blood pressure value is reached, the beat sound is no longer audible. Completely deflate the cuff. Remove the cuff and ear tips.

5.4.5. Record of measurements

Repeat the measurement at least twice. Remember to record your measurement results, as well as the time and date of the measurement immediately after the measurement. The most suitable time for measurement is morning, immediately after sleep, or just before dinner.

NOTE

Do not perform measurements without a pause in order to avoid distortion of results.

Sit or lie for 1 minute before repeating the measurement.

The following types of cuffs Prolife are available:

- cuff Prolife 07–12 cm for children, small size, XS, without ring;
- cuff Prolife 25–40 cm for adults, medium size, L, without ring;
- cuff Prolife 40–66 cm for adults, large size, XL, without ring;
- cuff Prolife 25–36 cm for adults, medium size, M, with ring;
- cuff Prolife 33–46 cm for adults, large size, L, with ring.

6 TROUBLESHOOTING

If problems occur when using the device, the following points should be checked and if necessary, the corresponding measures are to be taken:

Malfunction	Remedy
Poor sound transmission, distortion or continuous noise	<ol style="list-style-type: none">1. Check if the ear tips are clogged. If not, make sure they are snug and not worn.2. Check if the tube is cracked or twisted.3. Check for cracks in the stethoscope membrane.4. Make sure the working part of the stethoscope properly contact with the skin
The pressure does not increase when inflating the cuff with a bulb	<ol style="list-style-type: none">1. Make sure the valve is closed.2. Make sure the cuff is properly connected to the rubber bulb and manometer.3. Check the cuff, tube and bulb for leakage. Please contact the service center for replacing the parts
The air release rate cannot be set to 2–3 mm Hg/s	Disconnect the valve from the bulb to check if there are any obstacles to the air inside the valve. If the valve does not work properly, it must be replaced. Please contact the service center
At rest, the pointer is not at the mark 0+/- 3 mm Hg	<ol style="list-style-type: none">1. Make sure the valve is fully open during zero adjustment.2. Please contact the service center in case the deviation exceeds 3 mm Hg

Further information

The level of blood pressure is subject to fluctuations even with healthy people. It is important thereby that comparable measurements are carried out in the same conditions (quiet conditions)!

However, if there are technical problems in the blood pressure monitor, please contact the service center. Never attempt to repair the instrument yourself! Any unauthorized opening of the instrument invalidates all guarantee claims!

7 CARE AND MAINTENANCE

Proper care and maintenance ensure a long-life performance of the instrument.

WARNING

Clean the instrument only with a soft, dry cloth.

Follow the general rules below:

- Do not drop the instrument.
- Never inflate the cuff to a pressure value exceeding your normal systolic pressure by 30 mm Hg.
- Do not expose the device to extreme temperatures, humidity or direct sunlight.
- Avoid contact of the cuff fabric with sharp tools which may damage the cuff.
- Keep the cuff completely deflated.
- Do not disassemble the manometer under any circumstances.
- Store the complete set in a case bag so that all parts remain clean.
- Storage conditions: $-10\text{ }^{\circ}\text{C}$ $+70\text{ }^{\circ}\text{C}$ at relative humidity of 85% (non-condensing).
- Clean the manometer and the rubber bulb with a soft cloth. Disinfection is not necessary, because the manometer parts should not directly contact with the patient's body parts during the measurement.

Periodic instrument calibration

The accuracy of sensitive measuring instruments should be periodically checked. We recommend to check the static pressure indication every couple of years. Please contact the service center for more detailed information.

8 TECHNICAL SPECIFICATIONS

	Kit with M cuff	Kit with L cuff
Type	Aneroid Blood Pressure Kit	
Model	Prolife Professional	

Weight, approx., g	380	394
Dimensions (LxWxH), mm	175x95x60	225x55x120
Storage conditions	Temperature range: from $-10\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ Relative humidity: up to 85%	
Operating conditions	Temperature range: from $+10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ Relative humidity: up to 85%	
Measuring range	From 0 to 300 mm Hg	
Instrument uncertainty	± 3 mm Hg within from $+10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$	
Delay error	0–4 mm Hg	

9 SAFETY

Safety and care

- This instrument may be used only for the purpose described in this manual. The manufacturer is not liable for damages caused by improper use of the instrument.
- This instrument consists of sensitive components which should be treated with caution. Observe the storage and operating conditions described in the «Care and maintenance» section!
- Protect the instrument from water and moisture, extreme temperatures, impact and dropping, contamination and dust, direct sunlight, heat and cold.



Do not use the instrument if you think it is damaged or notice anything unusual. Read the additional safety instructions in the individual sections of this manual. Ensure that children do not use the instrument unsupervised: some parts are small enough to be swallowed. Do not allow playing with the instrument! Keep the instrument away from children.

- Use only approved accessories, detachable parts and materials, if the use of other parts or materials is unsafe.

10 CERTIFICATION

Standard compliance

The Aneroid Blood Pressure Kit **Prolife Professional** blood pressure monitor complies with Directive 93/42/EEC.

11 WARRANTY

The Aneroid Blood Pressure Kit **Prolife Professional** is guaranteed for 2 years from the date of purchase in case of self-used at home and for 1 year in case of used in medical institutions. The guarantee is only valid upon presentation of the guarantee card filled out by the authorized representative and the receipt.

	Warranty period of the device components is the following		Service life of the device components is the following	
	when used in medical institutions	when self – used at home	when used in medical institutions	when self – used at home
Manometer	1 year	2 years	10 years	10 years
Cuff	1 year	2 years	10 years	10 years
Stethoscope	1 year	2 years	10 years	10 years

WARNING

After-sales and free maintenance services are not provided in case of:

- using the device with violation of requirements specified in the instruction manual;
- damage caused by deliberate or erroneous actions of the consumer due to mishandling or negligence, as well as in other cases of violation by the consumer of storage, cleaning, transportation and operation requirements specified in the instruction manual.

WARNING

- Follow the instructions precisely to ensure reliable and long-term operation of the device.
- In case of abnormal operation of the device, please contact the seller.

- For repair and maintenance, please contact a specialized after-sales service.
- The manufacturer reserves the right to make structural changes of the device.

**WARNING**

The guarantee is only valid upon presentation of the guarantee card filled out by the seller.



The information of the date of mass production and the manufacture is placed on the individual package.

**Manufacturer:**

Wuxi Exanovo Medical Instrument Co. Ltd.,
No. 42 Xixin Road, Zhangjing Xibei Town, Wuxi City 214194 Jiangsu,
People's Republic of China.

**Authorized Representative in the EU:**

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