Blood Pressure Monitors for Mobile Devices

Chris Patricoski MD FAAFP
Kirt J Beck, Director TTAC
Telehealth Technology Assessment Center, ANTHC
Anchorage, Alaska
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Disclaimer

- Make, models and manufacturers of products are discussed.
- Some models are discussed as examples and not meant to be promotional marketing or advertisement for the product.
- Reviews are based on our specific experience, device and encounter and may not be generalizable.
- We do not endorse any particular product.
- Reviews are not meant to identify one particular device for purchase nor to direct clinical care.

Mobile Blood Pressure Monitors

Our Criteria

- Consumer based products
- Able to Travel (backpack, suitcase, etc.)
- Automatic inflation & measure
- No major software purchase required
- Under $300

Does Not Include

- Home health or remote monitoring devices with hubs
- Monitoring devices that are part of broader inclusive package
- Ambulatory Blood Pressure Devices
- Anything over $300 (consumer cost break)

Not Included

-Home Health Monitoring Devices with Hub-

All IDEAL LIFE Managers™ - our patented, FDA-approved monitoring devices - communicate through a wireless gateway known as the IDEAL LIFE Pod™. Users simply plug the Pod into a regular telephone jack and their home is instantly ready for integrated, automatic communication with any of IDEAL LIFE's remote health management products.

Not Included

-Home Health Monitoring Devices with Hub-

The BP Manager - used in conjunction with the IDEAL LIFE Pod™, a wireless gateway - transmits real-time information through any mode of communication, including phone lines, cell phones, and the Internet. Simply plug the Pod into a phone line and the system set-up is complete.

Not Included
-Units Part of a Broader Package-

A team at IBM Zurich Research Laboratory Zurich has created the IBM mobile health toolkit for gathering measurement data from a range of devices, and present it to management software via a well-defined and easily implemented interface. January 2005

http://www.ercim.eu/publication/Ercim_News/enw60/husemann.html

Not Included
-Ambulatory BP Monitors-

A&D LifeSource TM-2430

@ $1,800

WA Amb BP Recorder 6100

@ $1,900

Tiba or Mortura Medical

Mobile Blood Pressure Monitors

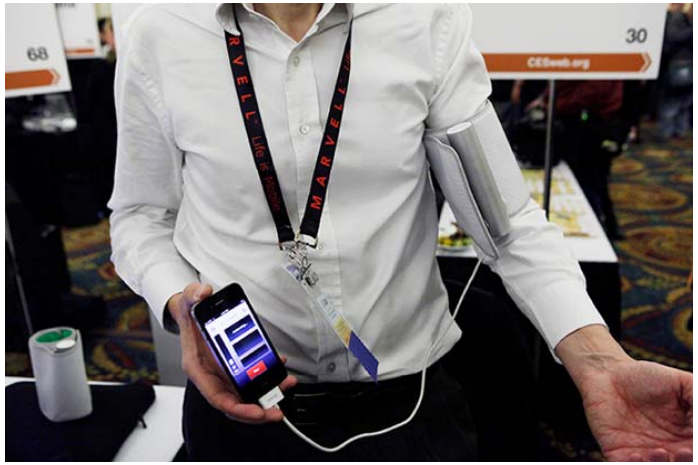
Our Criteria

- Consumer based products
- Able to Travel (backpack, suitcase, etc.)
- Automatic inflation & measure
- No major software purchase required
- Under $300

Mobile BP Pressure Devices

Our Definition

I would like a reasonably priced BP unit that I can travel with and download my data.

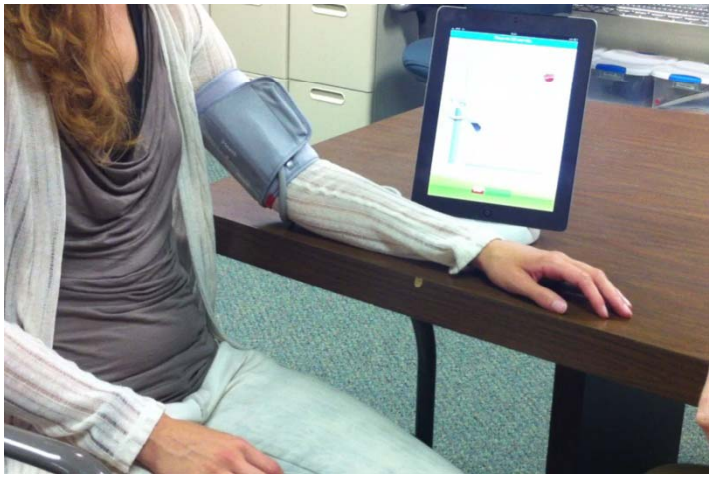


Photos courtesy of www.wired.com www.marriott.com and www.freefoto.com

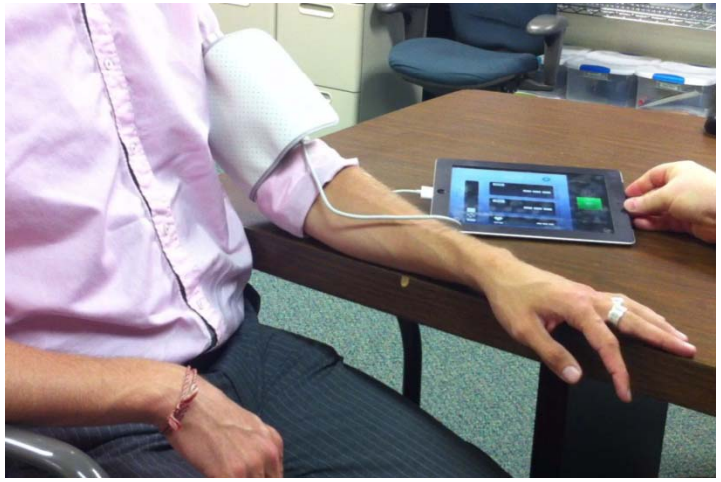
Blood Pressure Monitors

Four Units Identified

iHealth BP3



Withings BP-800



Omron BP791 IT

Omron HEM-670 IT

Blood Pressure Monitors

Our Cost

iHealth BP 3	**Omron BP791IT**
$120	$80
Withings BP-800	**Omron HEM-670IT (wrist)**
$138	$149

iHealth BP 3

Withings BP-800

Omron BP791 IT

Omron HEM-670 IT

Blood Pressure Monitors

Two methods of mobility

1. iPhone (smartphone or device)
   - iPhone App
2. Laptop with USB connection
   - Personal Health Record

Blood Pressure Monitors

iHealth BP 3	**Omron BP791IT**
iPhone, iPad, iTouch iHealth App (v2.1.3)	Laptop with USB connector Microsoft Health Vault drivers for Omron BP791IT
Withings BP-800	**Omron HEM-670IT**
iPhone, iPad, iTouch Withings App (v3.7)	Laptop with USB connector Microsoft Health Vault drivers for Omron HEM-670IT

iHealth BP 3

iHealth BP 3
-contents-

iHealth BP 3

Dock and Power Cord

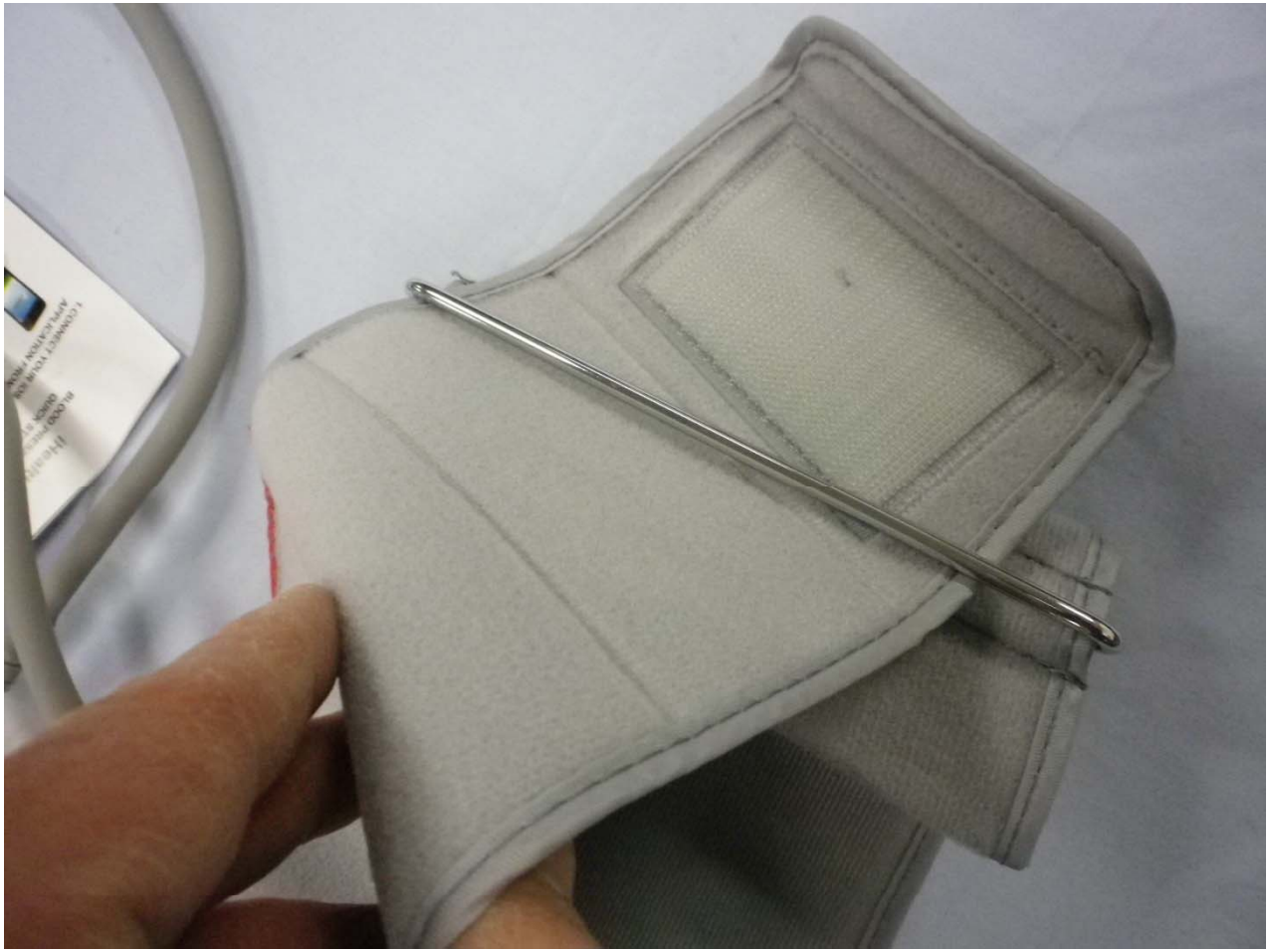
iHealth BP 3

iHealth BP 3

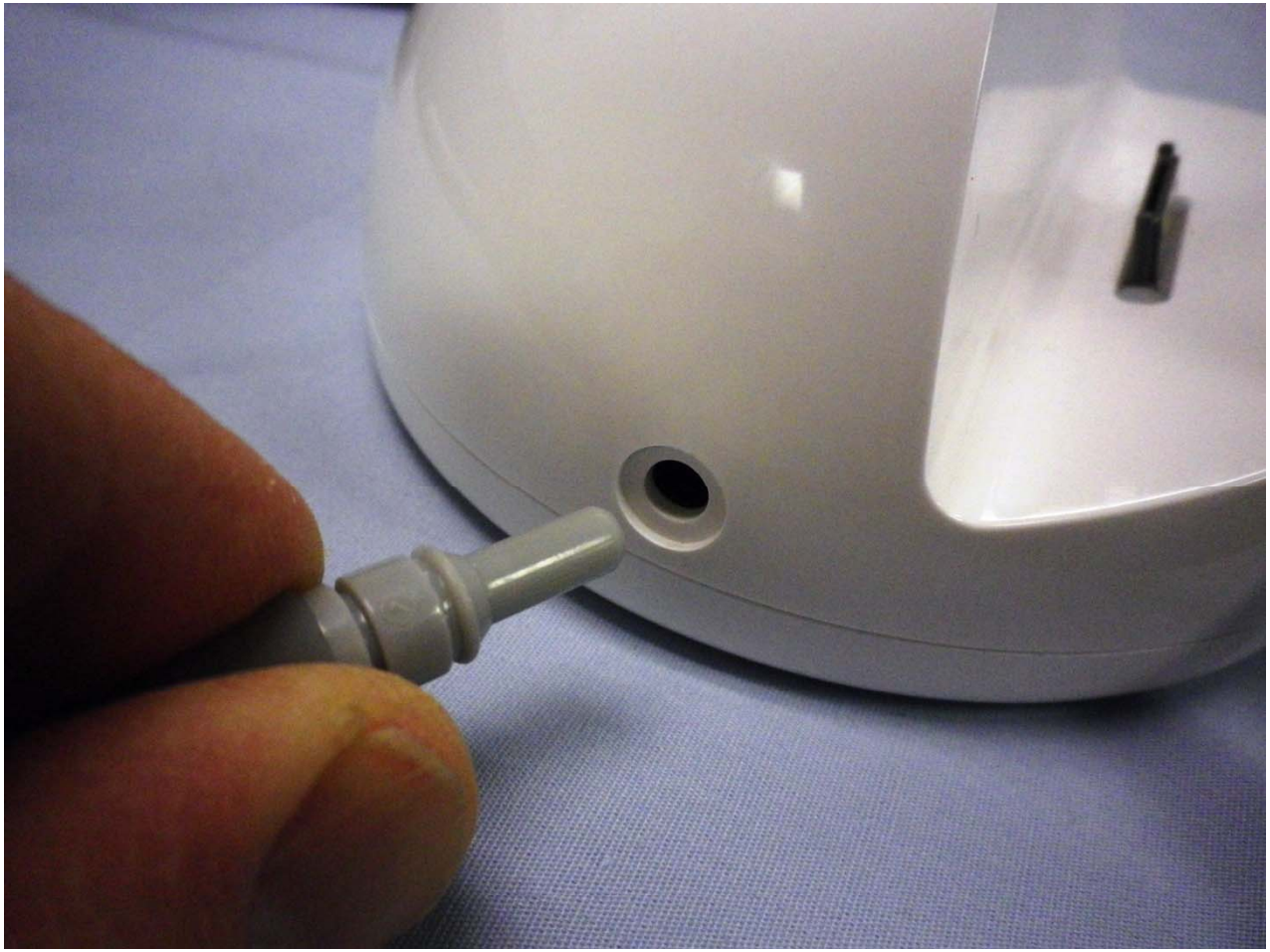
iHealth BP 3

iHealth
1 Place bottom of cuff 1/2"above bend in elbow
2 Rest arm on table
Large Adult Cuff
30-42cm
11-13/16~16-1/2 INCH

iHealth BP 3

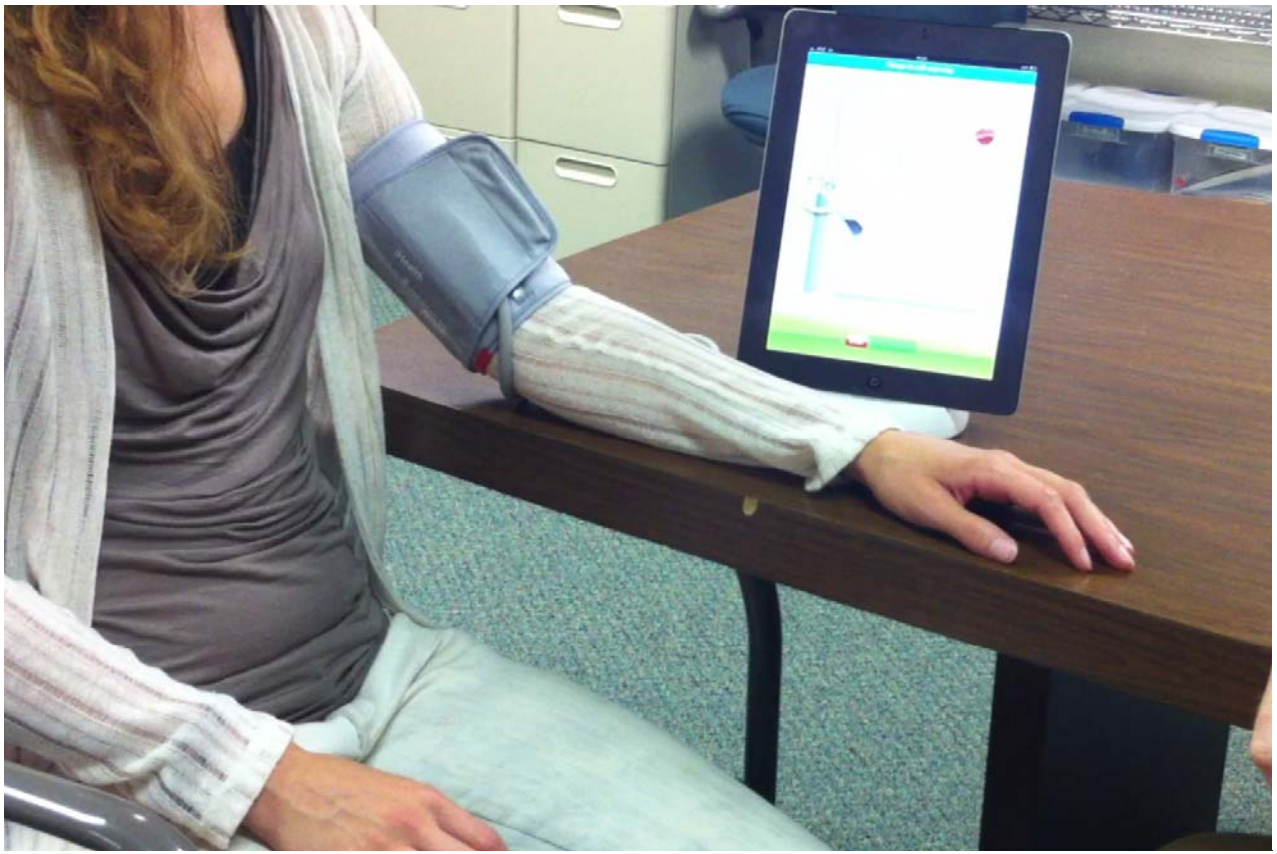


iHealth BP 3



iHealth BP 3

iHealth BP 3



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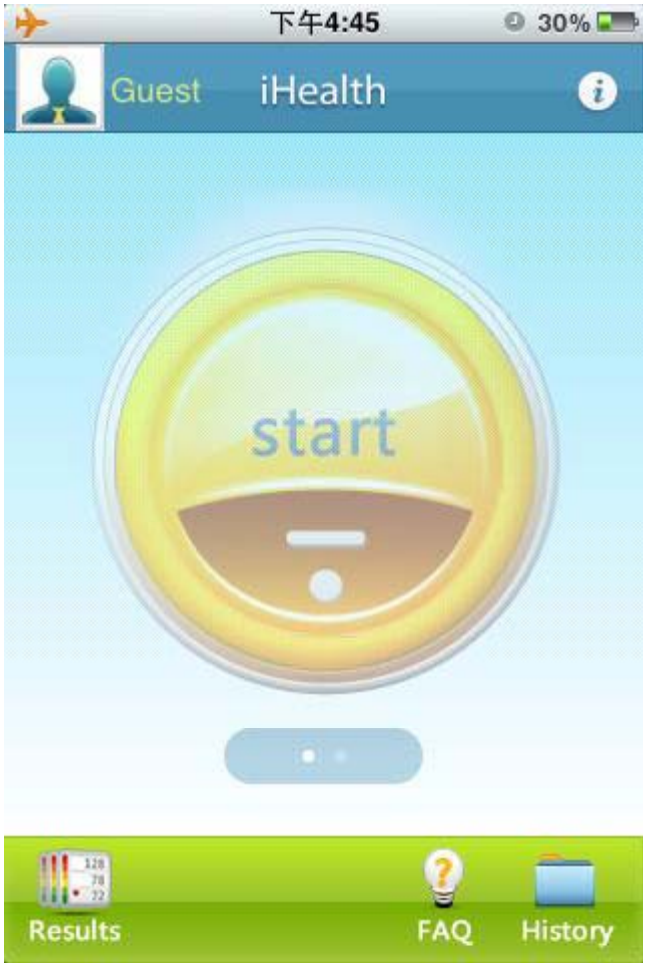
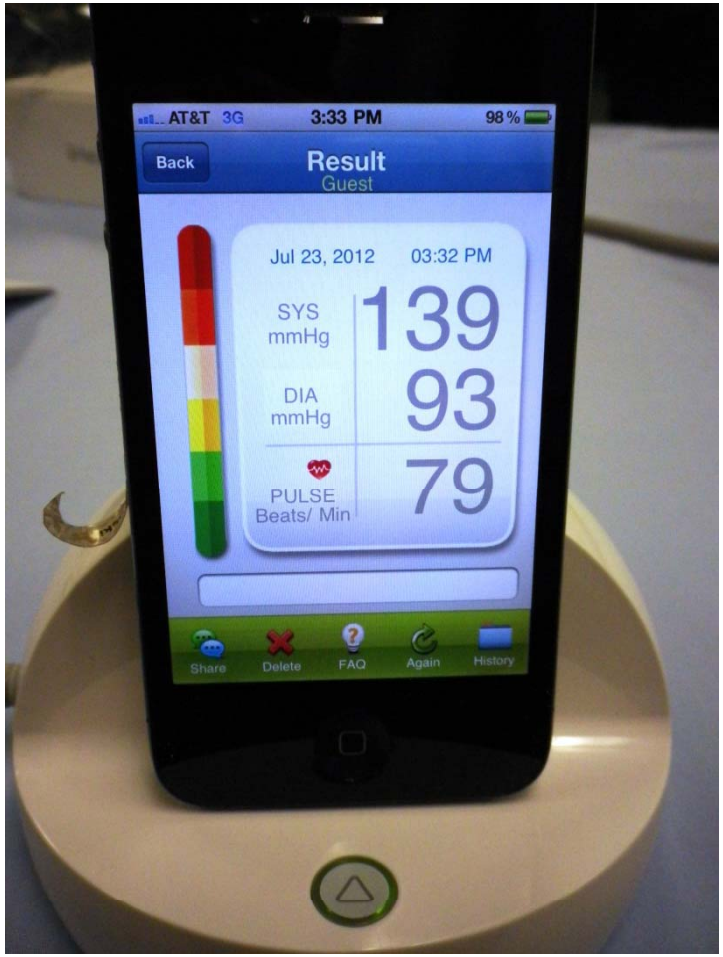


iHealth BP 3

iHealth BP 3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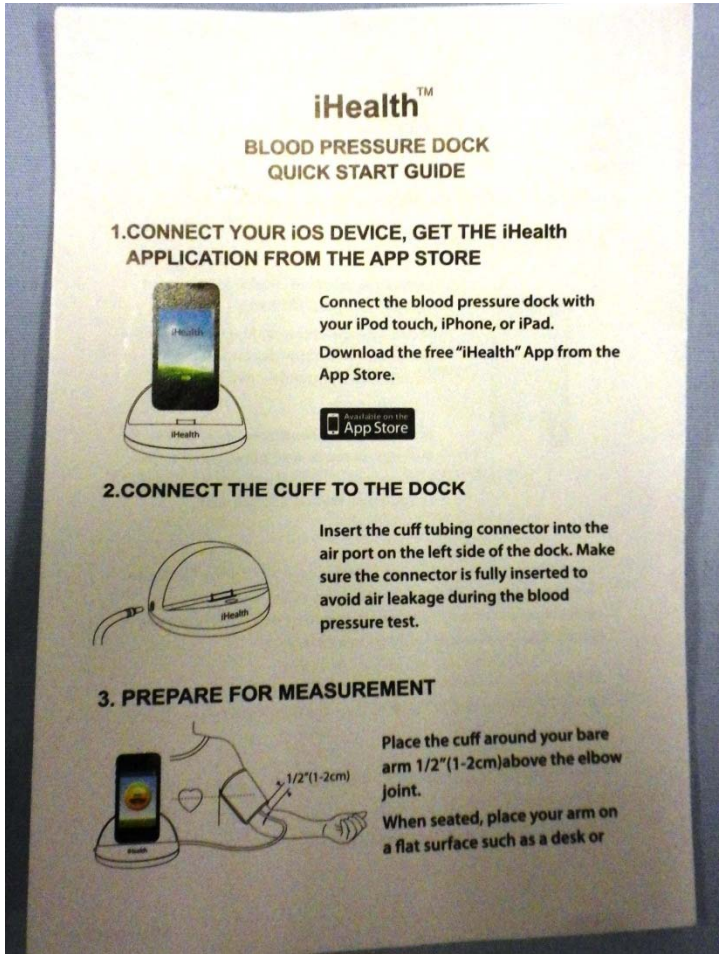
History

iHealth BP 3



iHealth™

BLOOD PRESSURE DOCK
QUICK START GUIDE

1.CONNECT YOUR iOS DEVICE, GET THE iHealth APPLICATION FROM THE APP STORE

Connect the blood pressure dock with your iPod touch, iPhone, or iPad.

Download the free "iHealth" App from the App Store.

Available on the App Store

2.CONNECT THE CUFF TO THE DOCK

Insert the cuff tubing connector into the air port on the left side of the dock. Make sure the connector is fully inserted to avoid air leakage during the blood pressure test.

3. PREPARE FOR MEASUREMENT

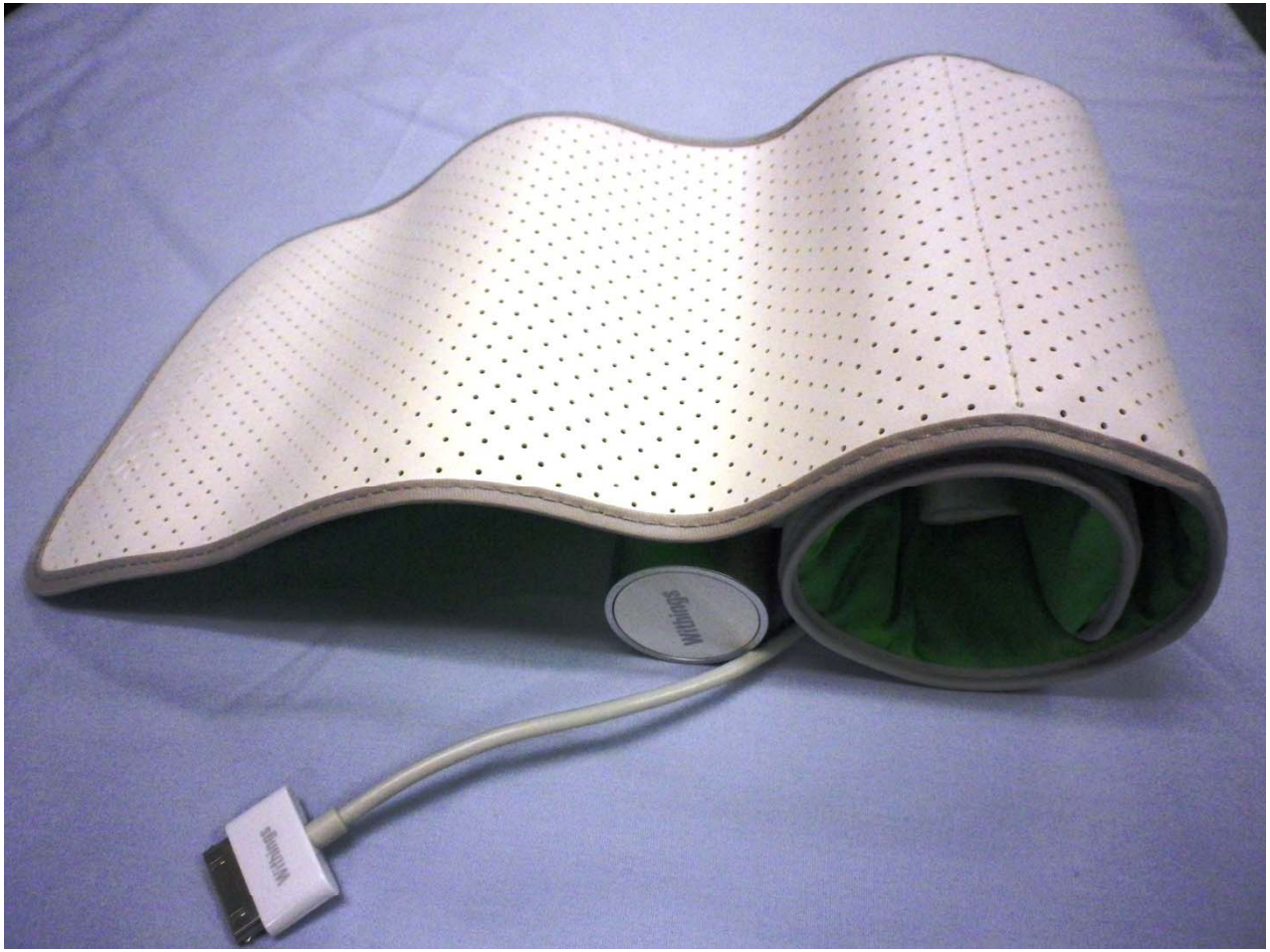
1/2"(1-2cm)

Place the cuff around your bare arm 1/2"(1-2cm)above the elbow joint.

When seated, place your arm on a flat surface such as a desk or

Withings BP-800

Withings BP-800



Withings BP-800
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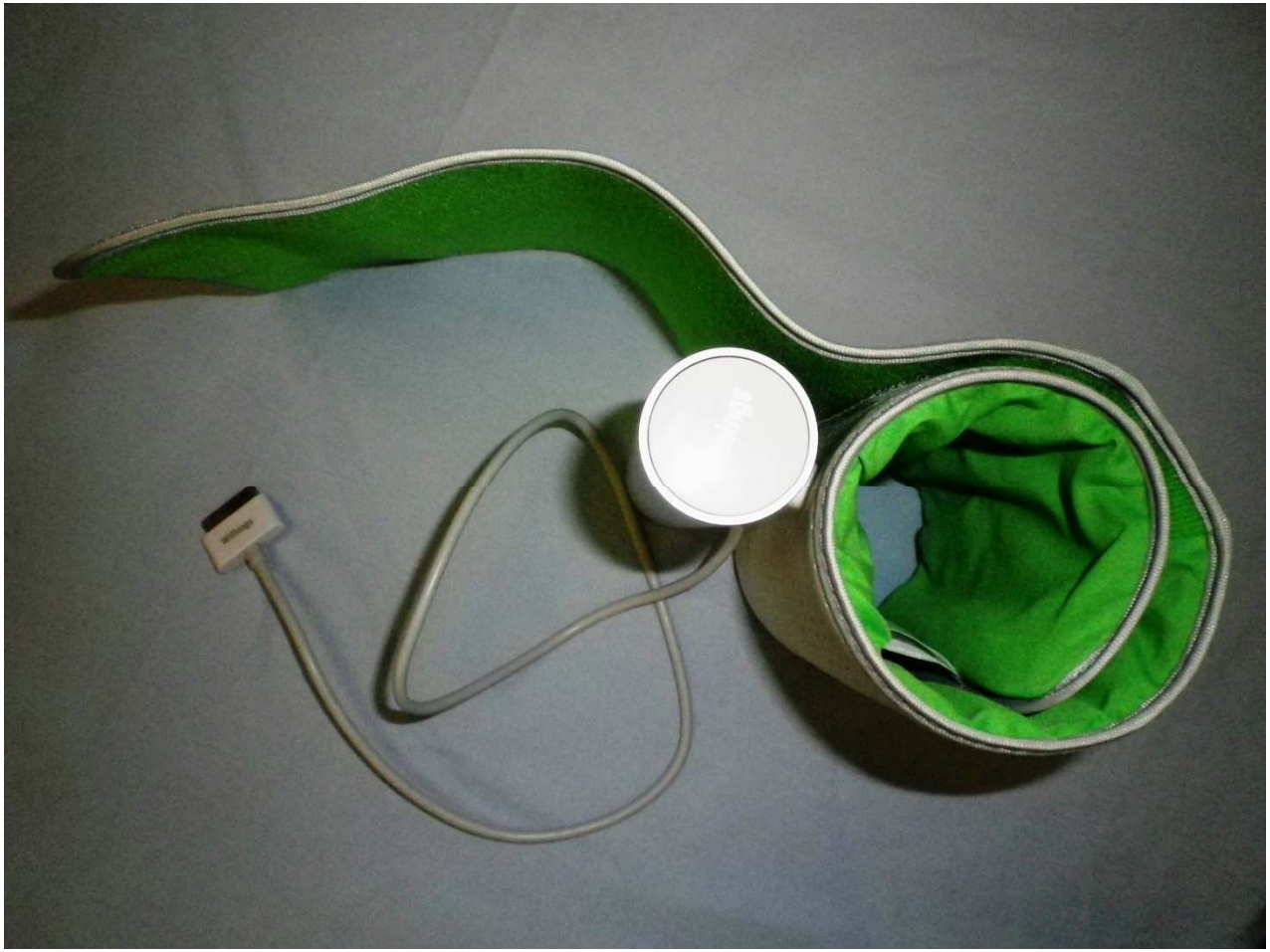
Withings BP-800



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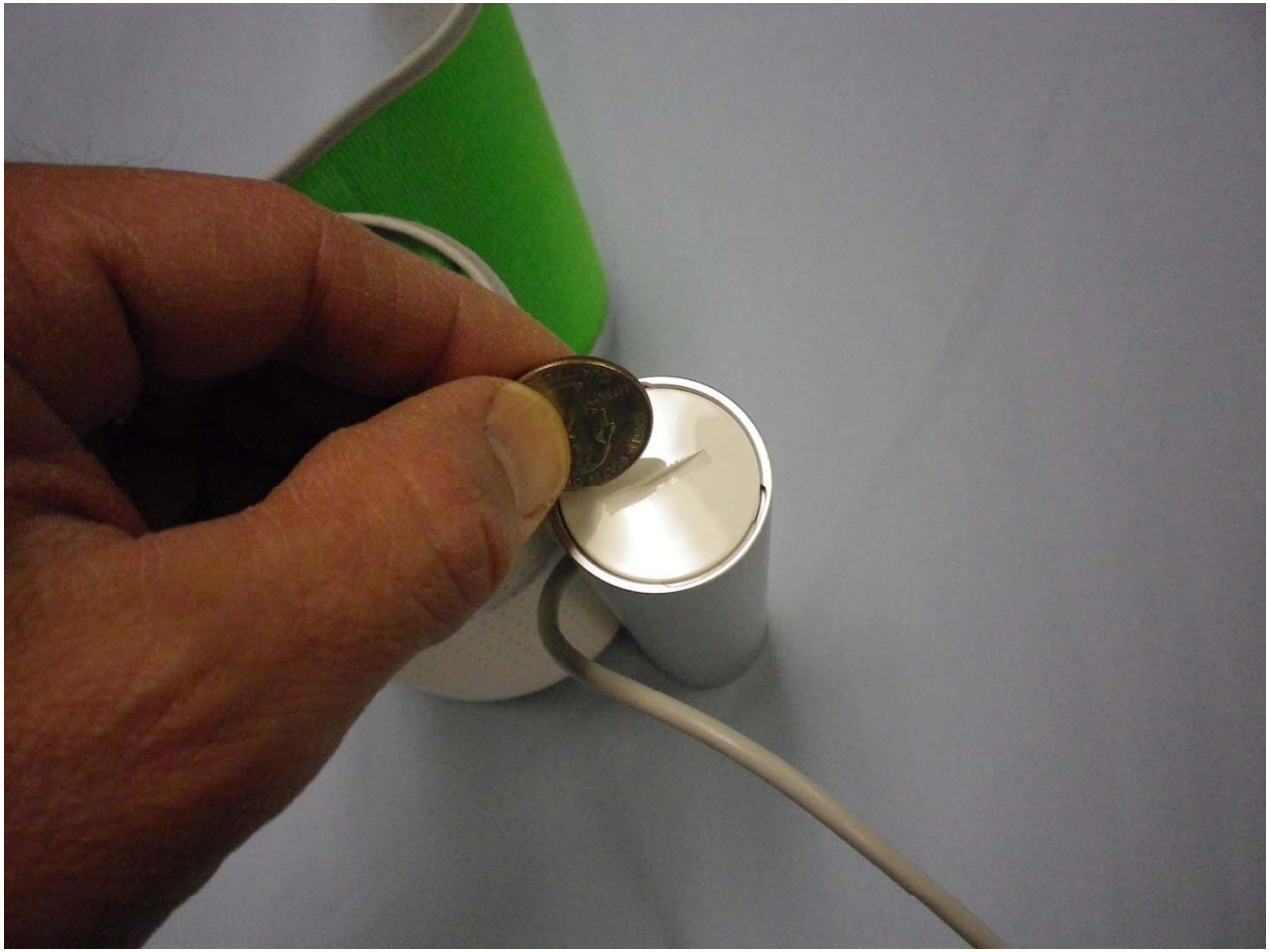
Withings BP-800



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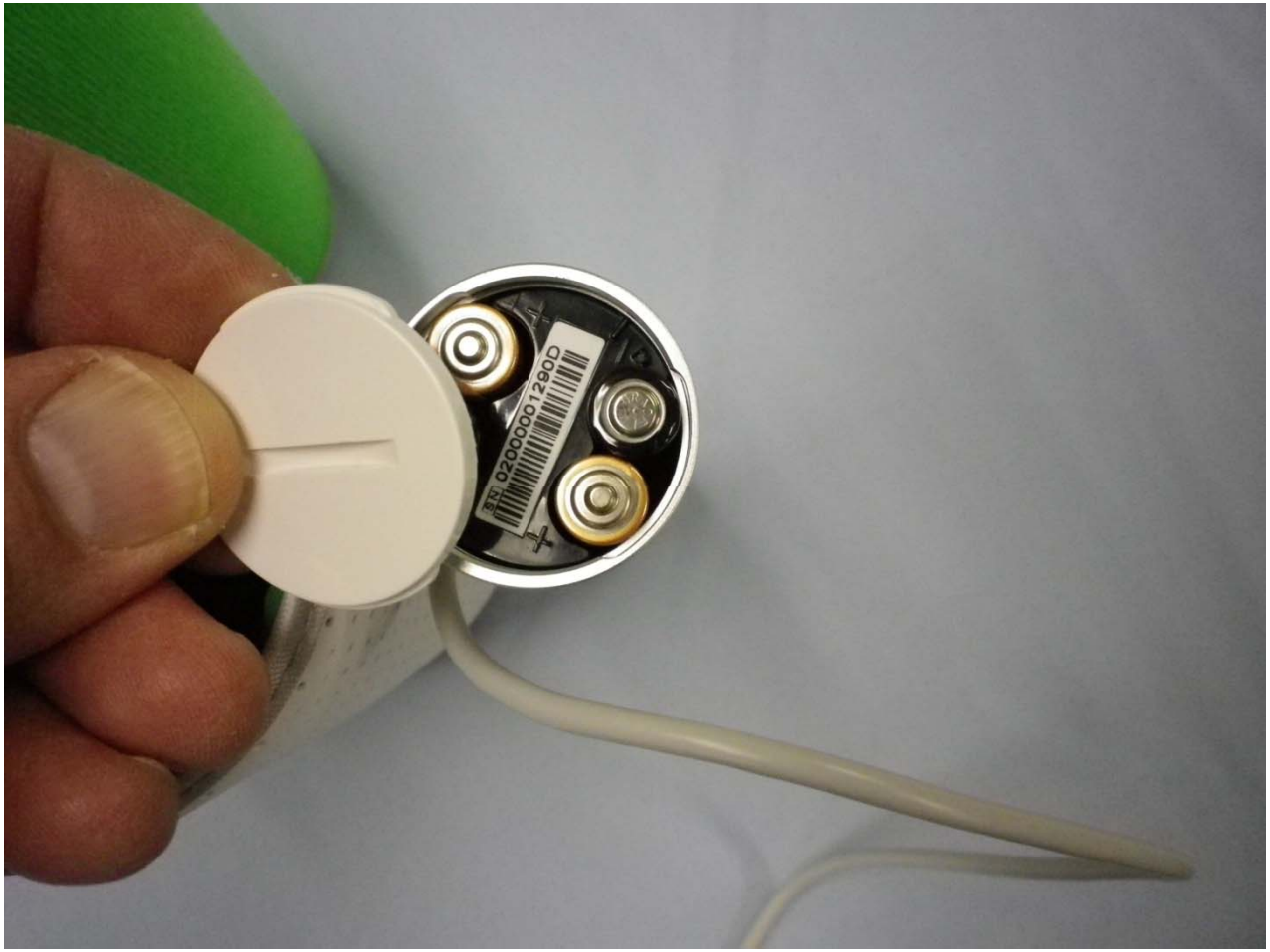

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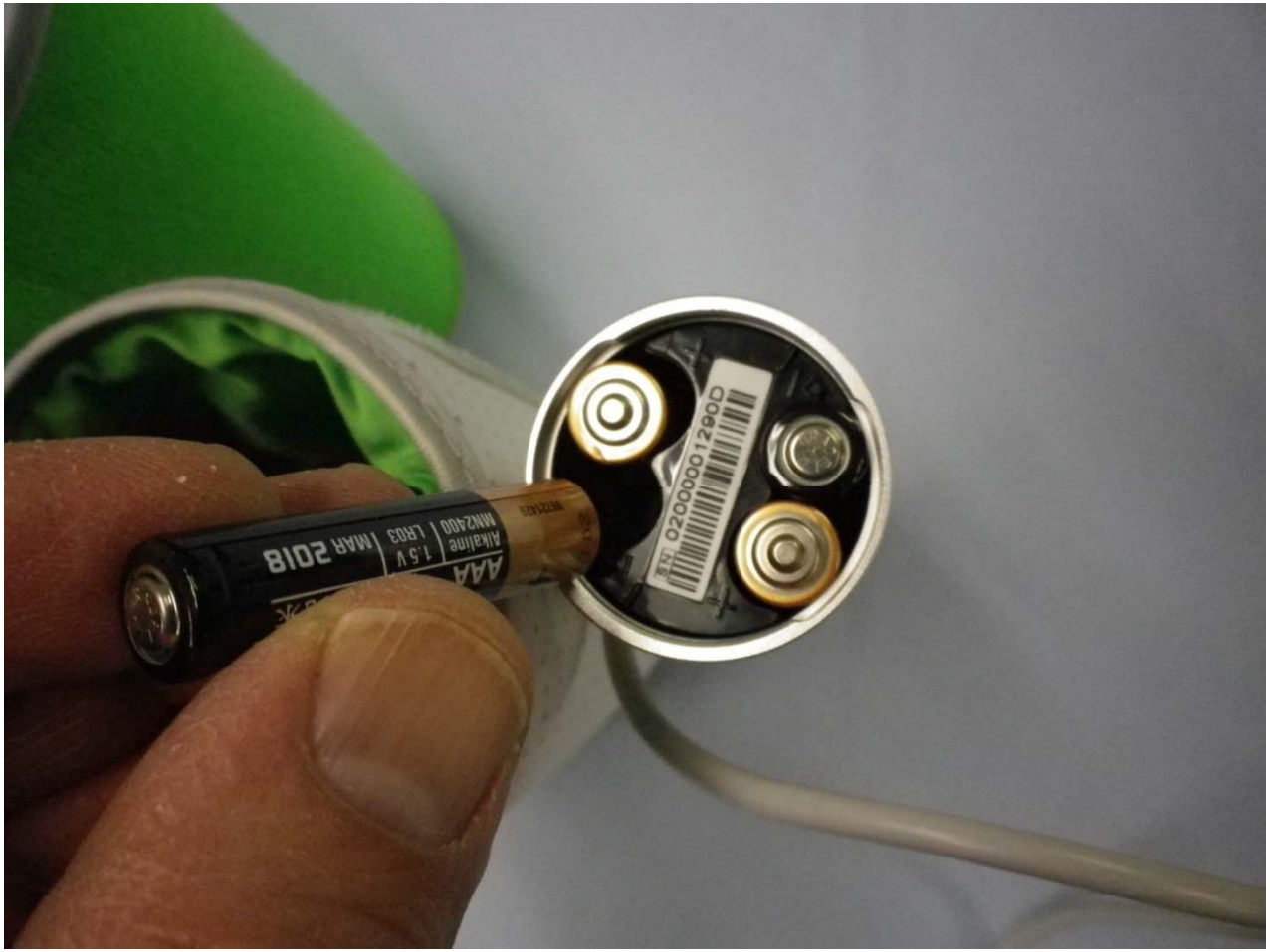

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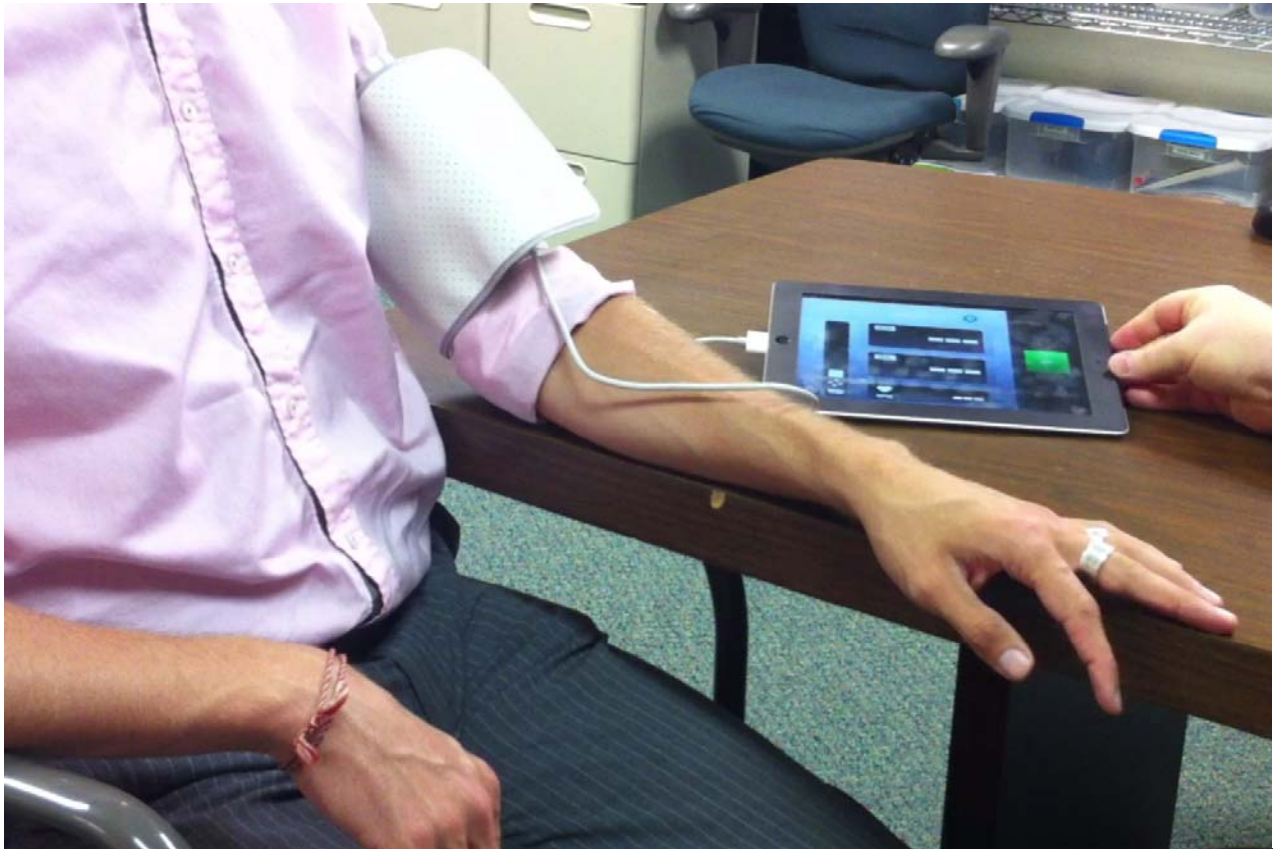

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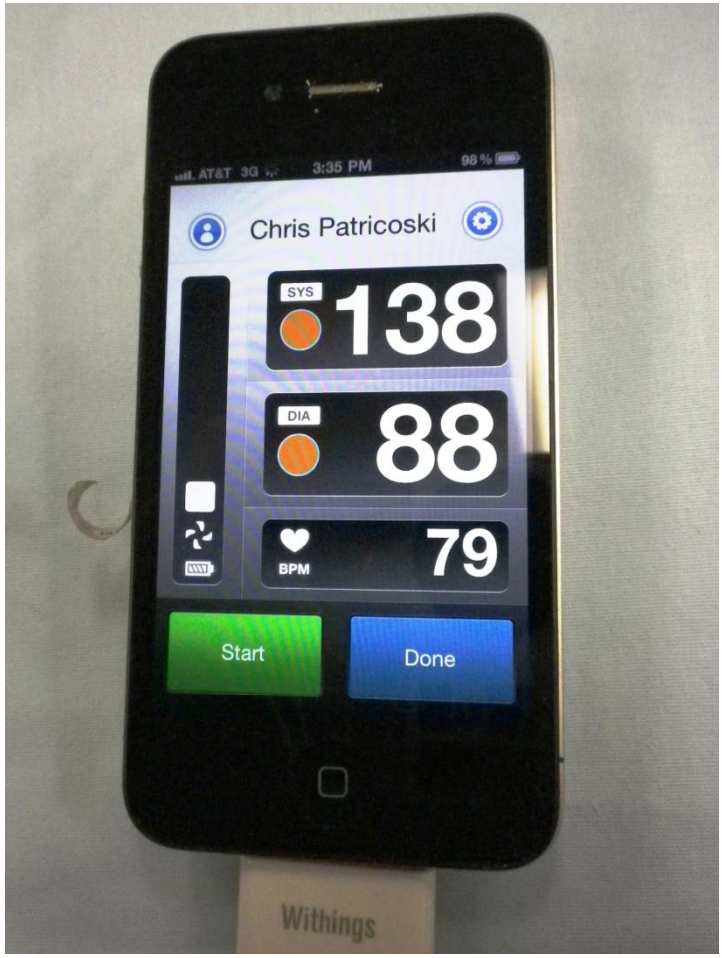

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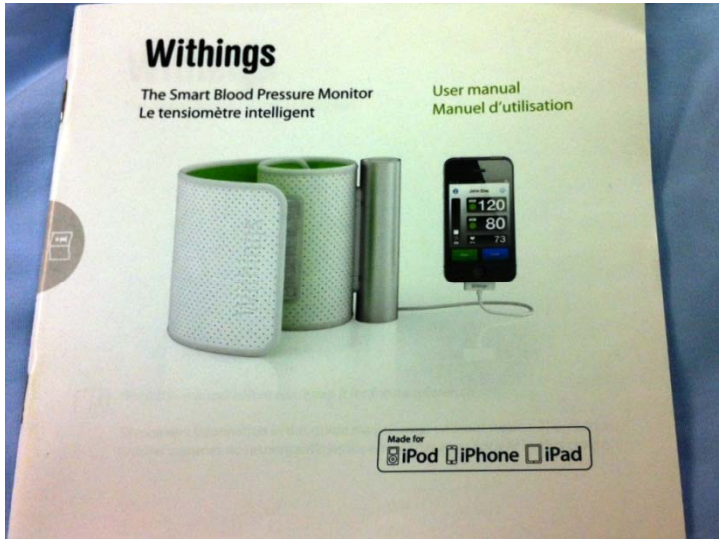

Withings BP-800

Omron BP791IT

Omron BP791IT

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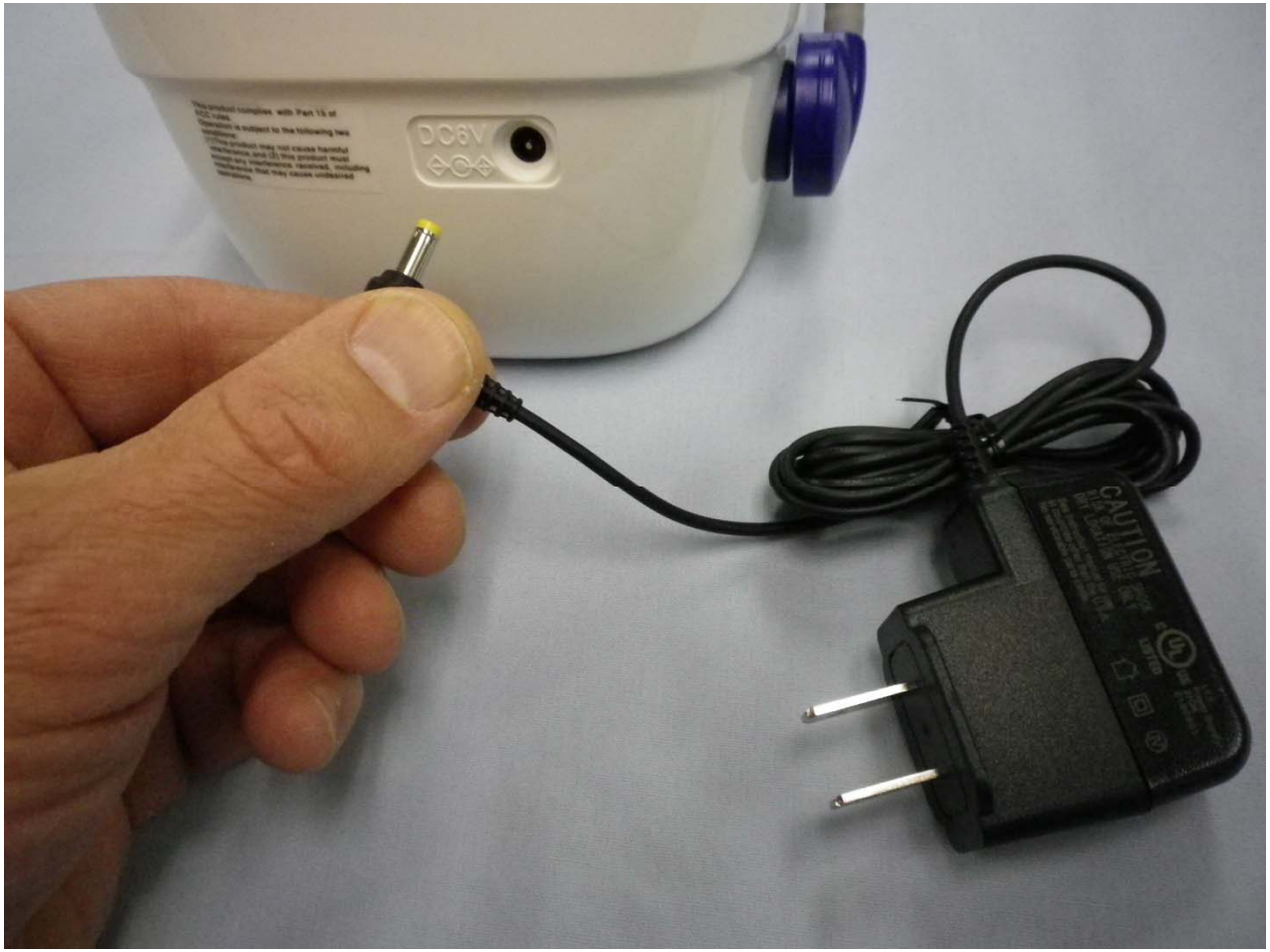
Omron BP791IT



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Omron BP791IT

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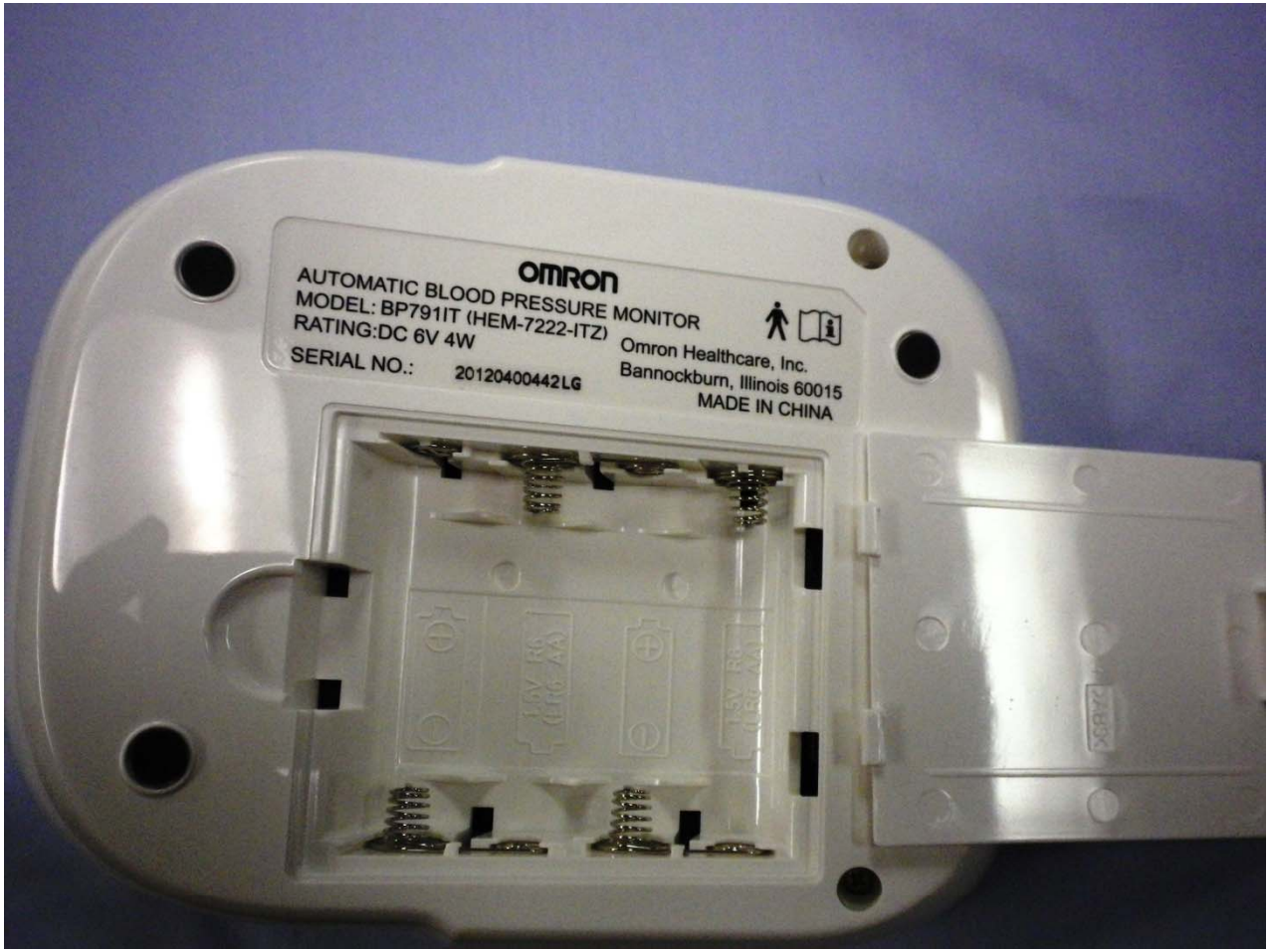

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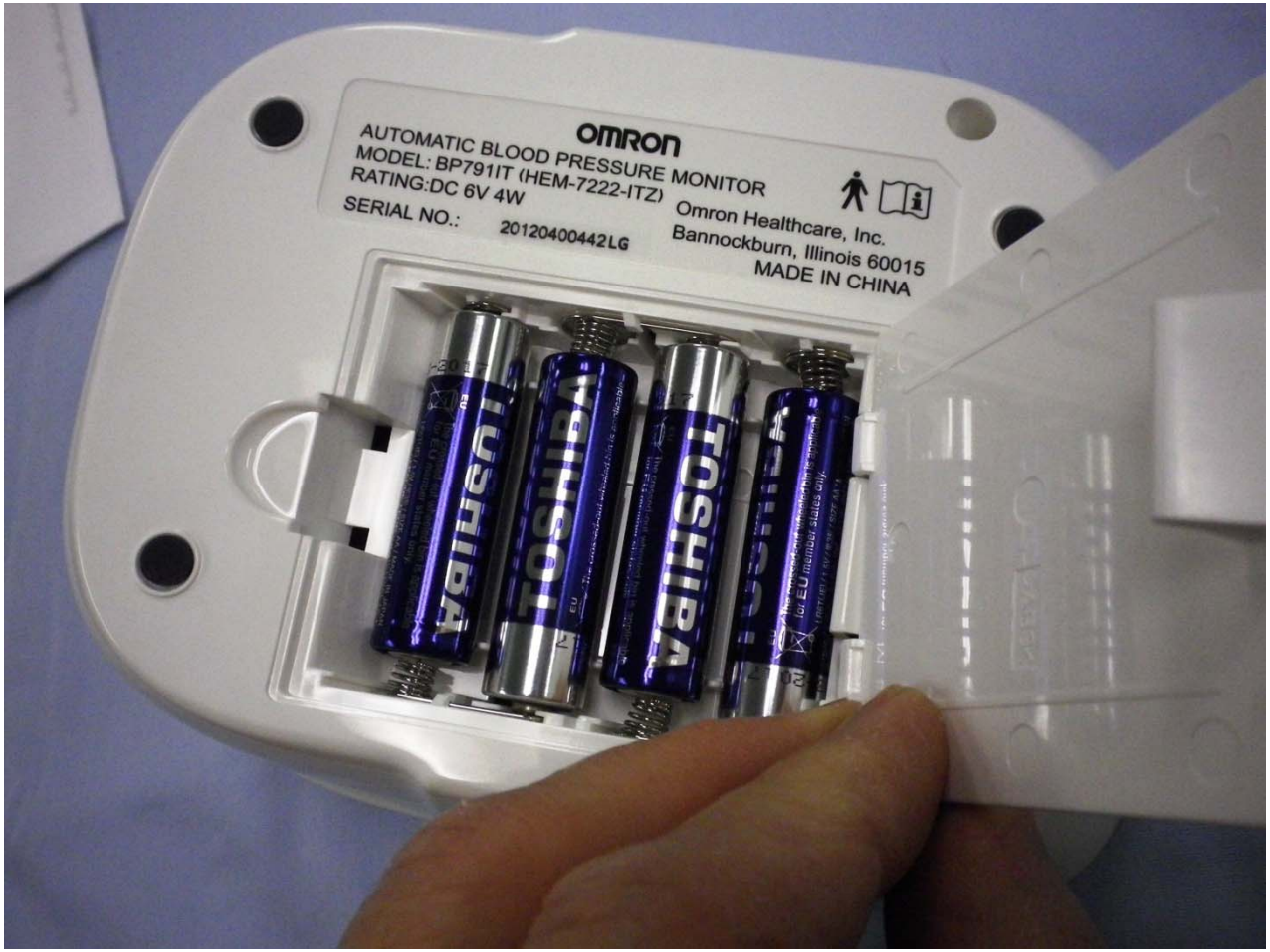

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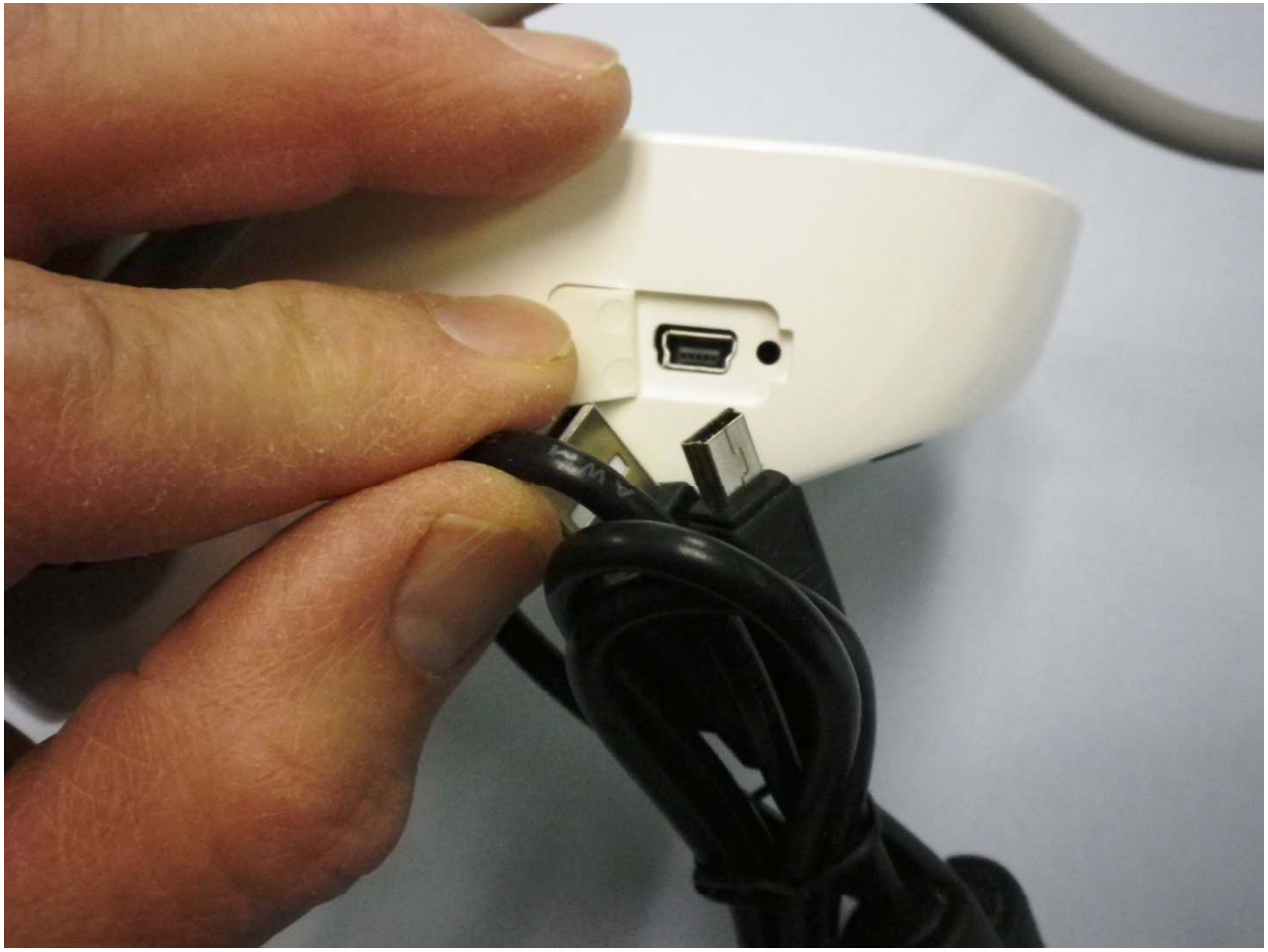

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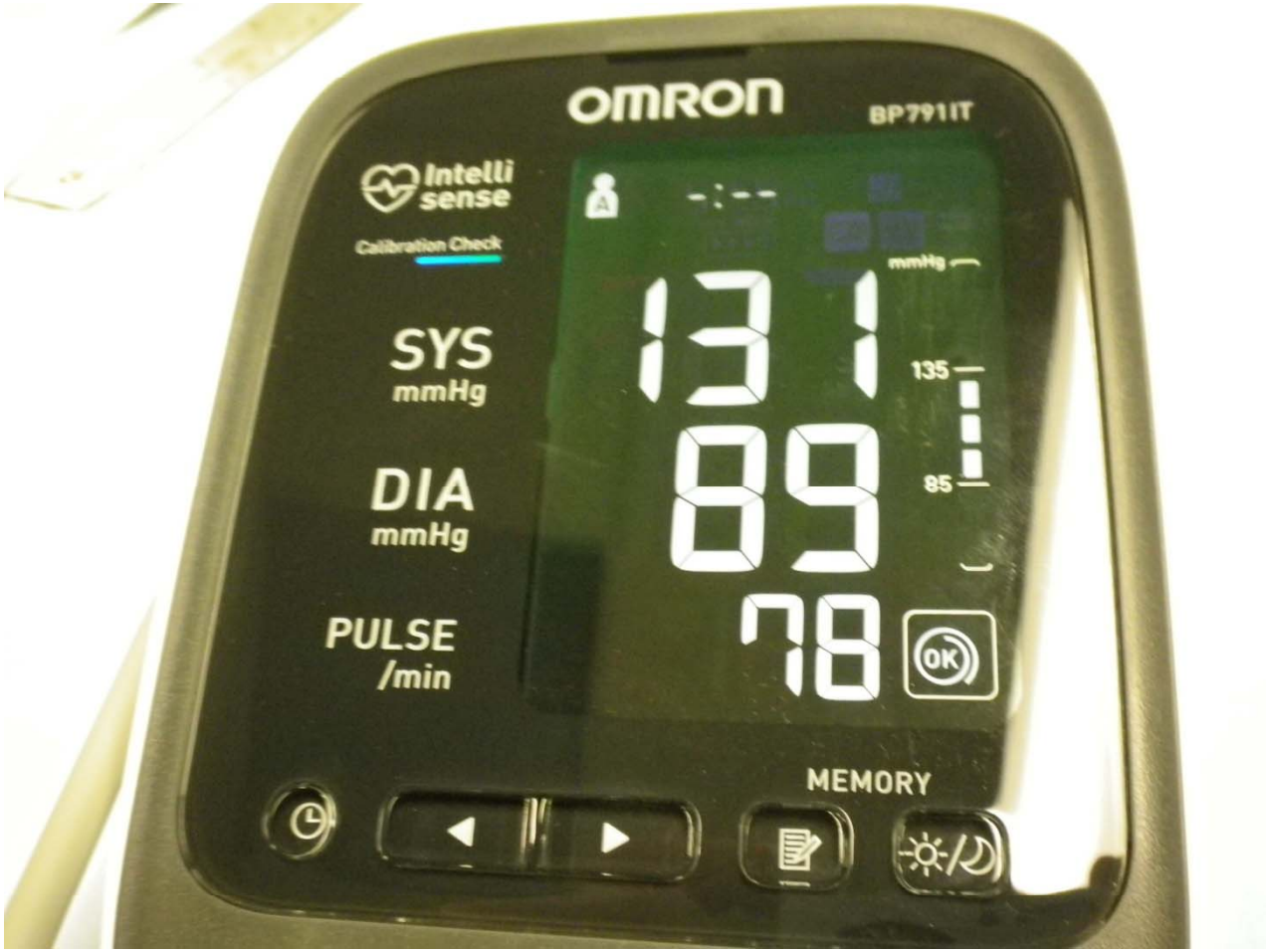

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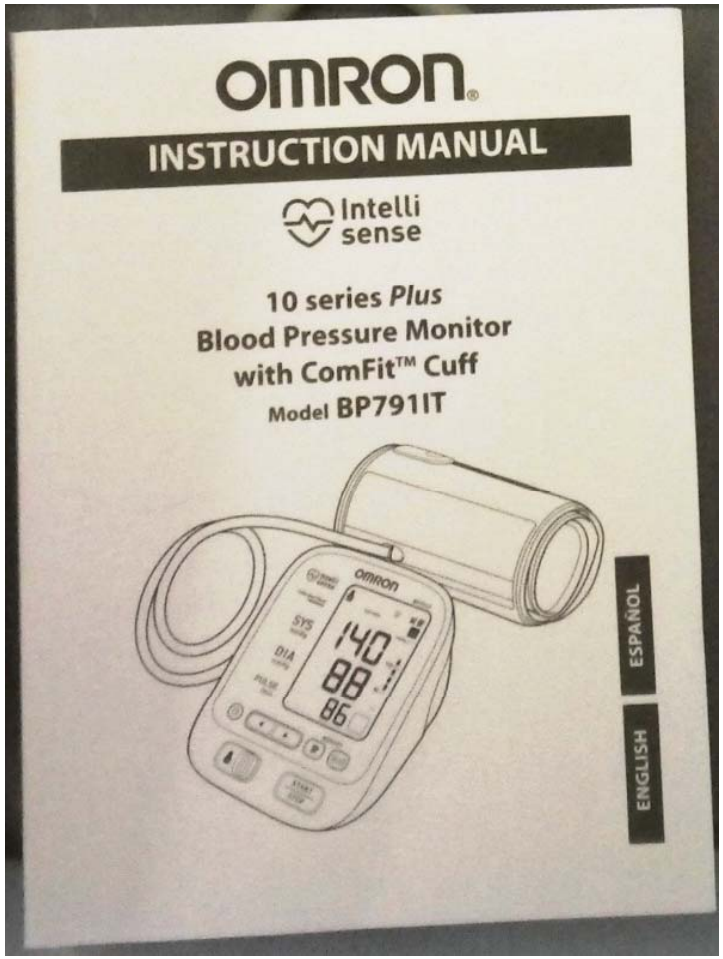

Omron BP791IT

Omron Wrist HEM-670IT

Omron Wrist HEM-670IT

Omron Wrist HEM-670IT
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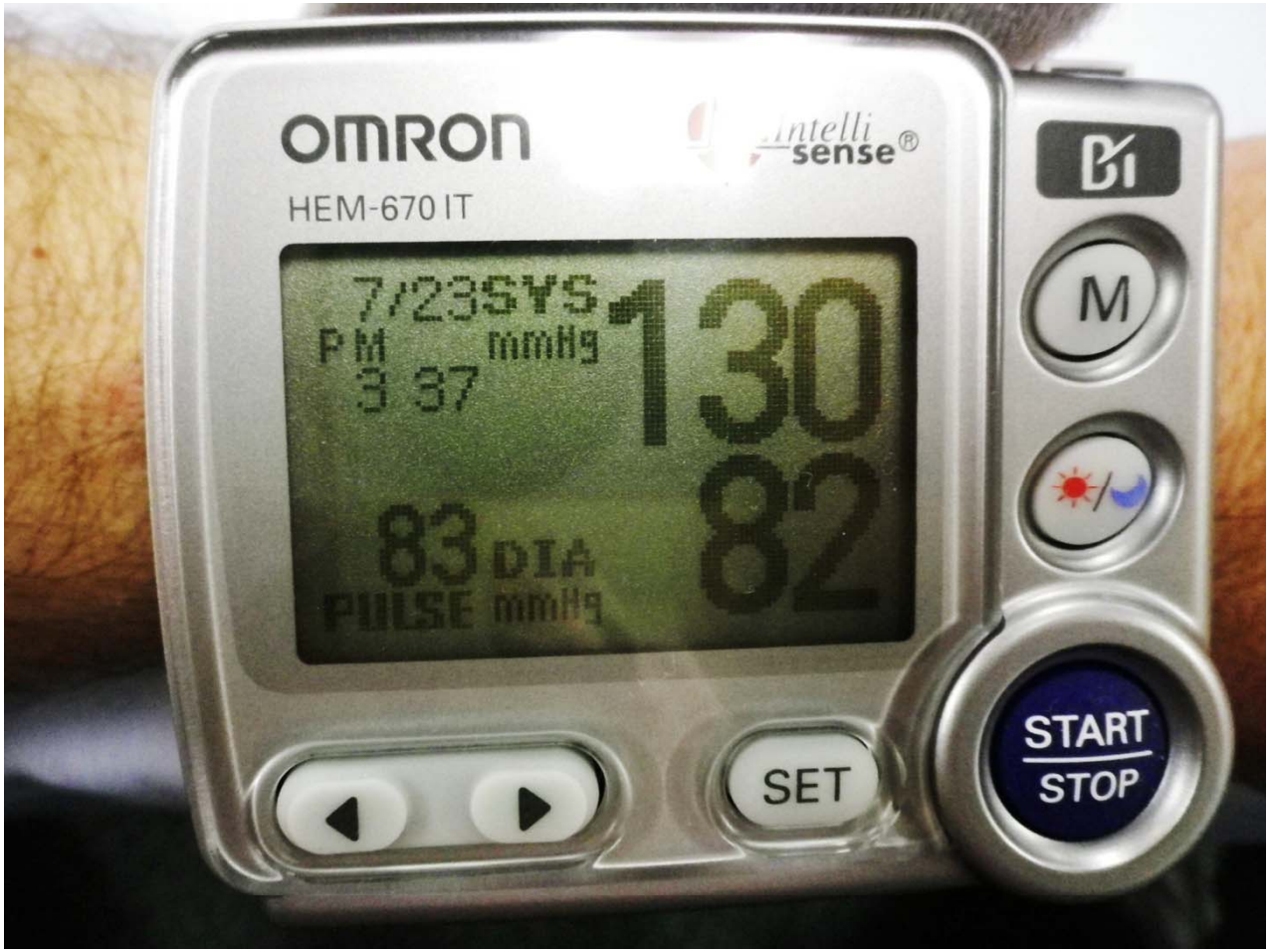
Omron Wrist HEM-670IT

Omron Wrist HEM-670IT

Omron Wrist HEM-670IT

Omron Wrist HEM-670IT



Omron Wrist HEM-670IT

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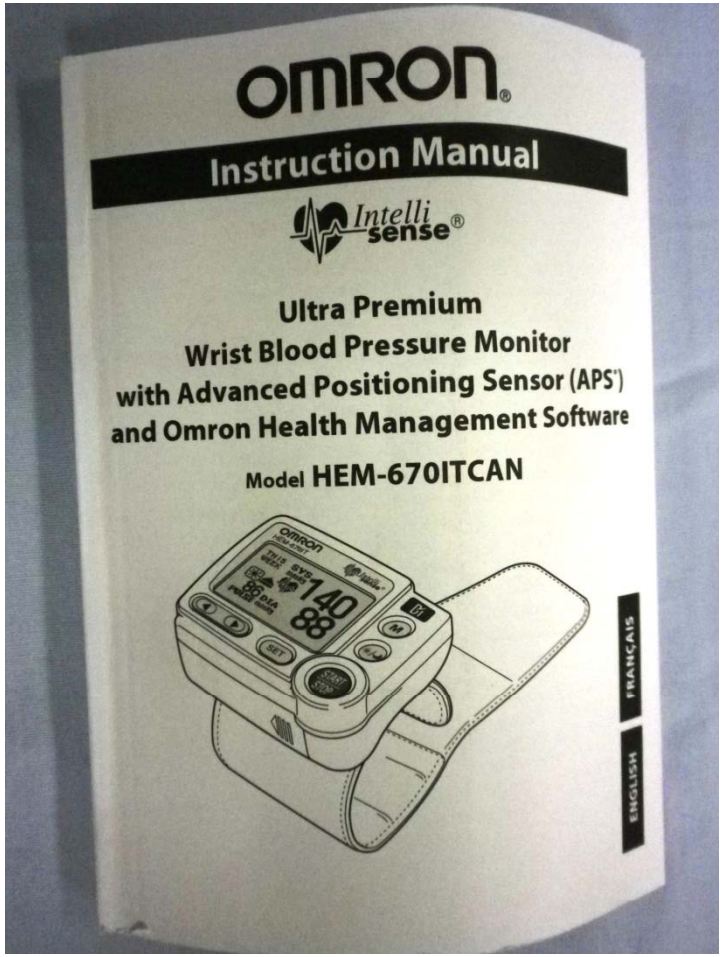
Omron Wrist HEM-670IT

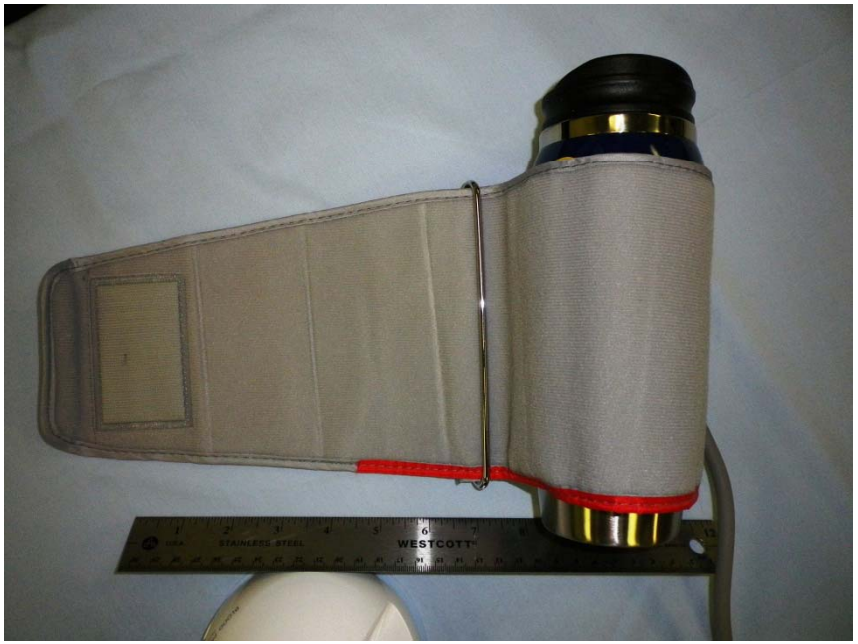


Omron Wrist HEM-670IT

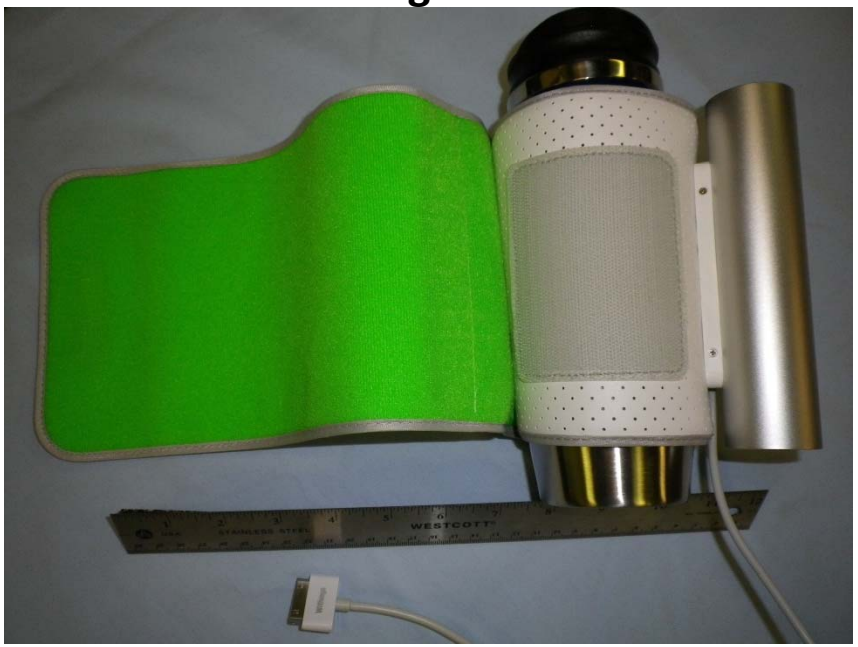
Mobile Blood Pressure Devices
-form factor-

iHealth BP 3	Withings BP-800	Omron BP791IT	Omron HEM-670IT (wrist)
iHealth Lab, Inc	Withings	Omron Healthcare, Inc.	Omron Healthcare, Inc.
www.iHealth99.com	http://www.withings.com	http://www.omronhealthcare.com	http://www.omronhealthcare.com
Upper Arm Cuff	Upper Arm Cuff	Upper Arm Cuff	Wrist Cuff
Wrap cuff with cinch bar	Spring, curved cuff	Spring, curved cuff	Spring, curved cuff
Cuff, Air Tube and Station Iphone dock	Cuff, Integrated Cylinder and Cable	Cuff, Air Tube and Station	Wrist Cuff and Cable
Display via iPhone, iPad, iTouch	Display via iPhone, iPad, iTouch	Display on BP Station	Display on Wrist Unit
Has Air Tube	No Air Tube	Has Air Tube	No Air Tube

iHealth BP3



Withings BP-800



Omron BP791 IT

Omron HEM-670 IT

iHealth BP3

Withings BP-800

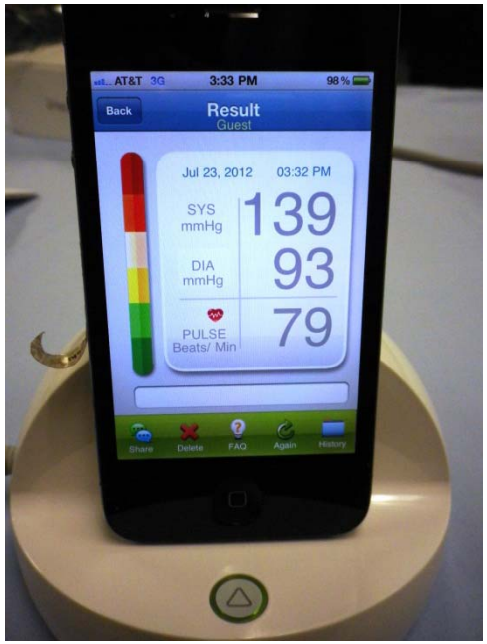
Omron BP791 IT

Omron HEM-670 IT

Mobile Blood Pressure Devices
-Functional Aspects-

iHealth BP 3	Withings BP-800	Omron BP791IT	Omron HEM-670IT (wrist)
BP = Number & graphic with magnifying glass rising P = pulse wave graphic & Heart beating	BP = Number & graphic with fan twirling P = Heart beating	BP = Number P = Heart beating	BP = Number P = Heart beating
Takes P during up Cycle	Inflates above max Systolic	Inflates above max Systolic	Takes P during up Cycle
43 second read	35 second read	35 second read	30 second read
Soft cuff; a little difficult to put on, straighten out	Easy to position, but tightest cuff with inflation	Typical BP cuff easy to position	Easy on the wrist, but positional

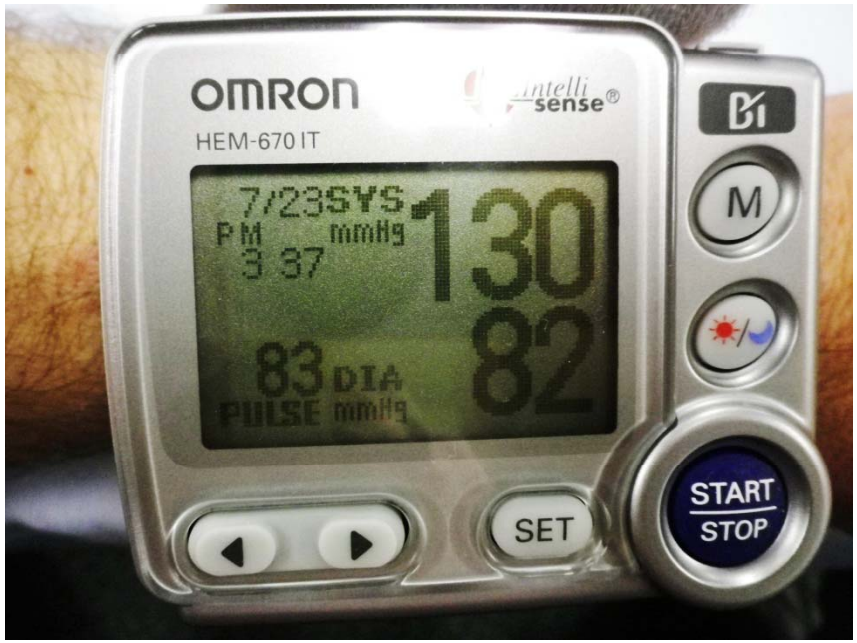
iHealth BP3



Withings BP-800

Omron BP791 IT

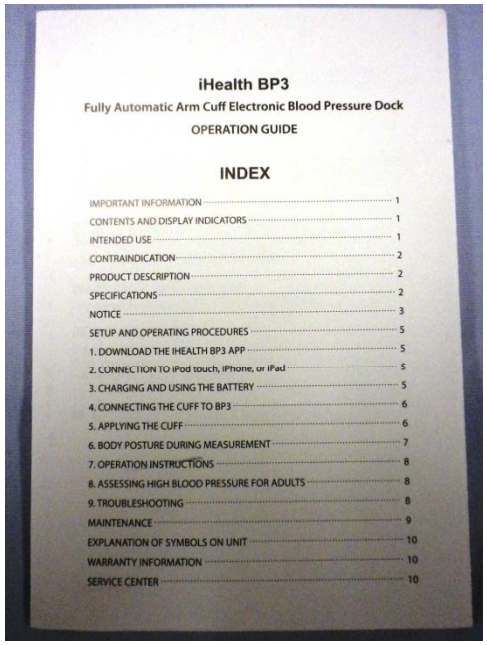
Omron HEM-670 IT



Mobile Blood Pressure Devices
-Comments-

iHealth BP 3	Withings BP-800	Omron BP791IT	Omron HEM-670IT (wrist)
A little hard to put on & position cuff	Easy to slide on & can grab cylinder to position	Typical BP easy to put on & position	Easy simple to put on
Takes P during up Cycle	Inflates above max Systolic	Inflates above max Systolic	Most positional
Soft cuff	Nice twirling fan graphic	Most conventional unit	Small letters & numbers
Takes longer to do the reading, but don't really notice because of the graphic	So tight that in can hurt a little with inflation		Used battery power faster than other units

iHealth BP3



iHealth BP3

Fully Automatic Arm Cuff Electronic Blood Pressure Dock

OPERATION GUIDE

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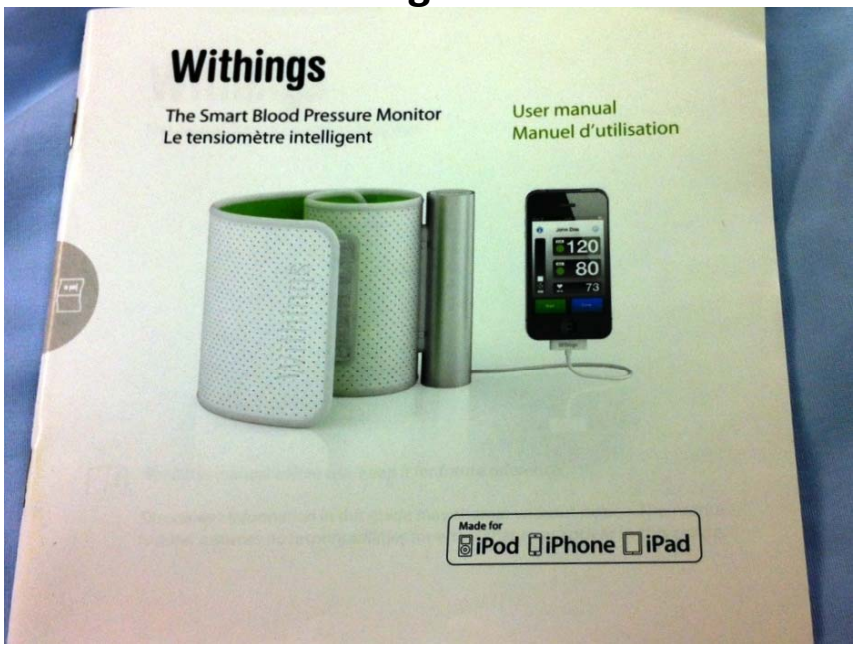
Withings BP-800



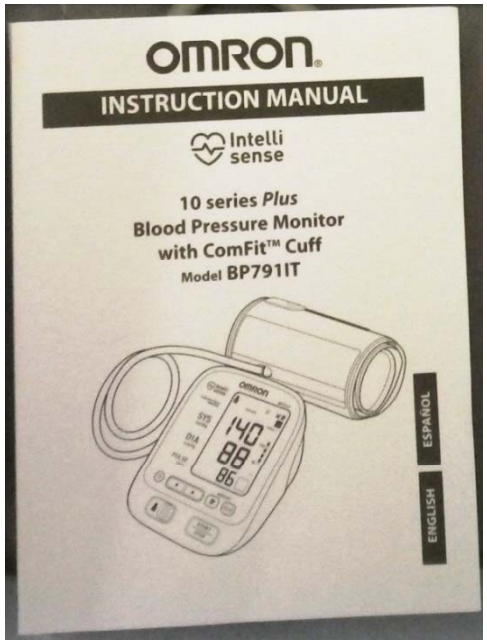
Withings

The Smart Blood Pressure Monitor
Le tensiomètre intelligent

User manual
Manuel d'utilisation

Made for iPod iPhone iPad

Omron BP791 IT



OMRON

INSTRUCTION MANUAL

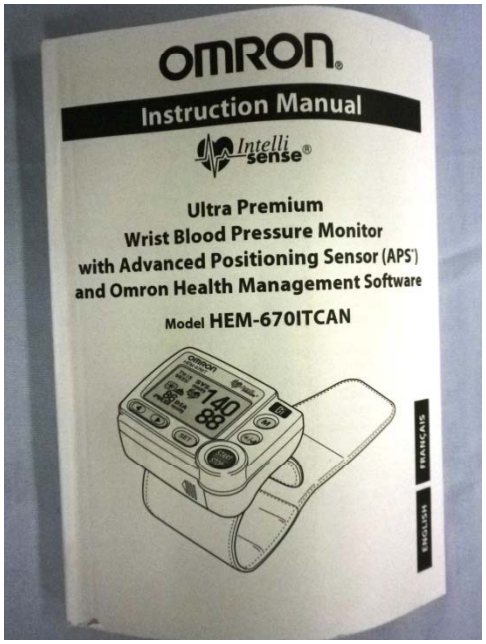
Intelli sense

10 series *Plus*
Blood Pressure Monitor
with ComFit™ Cuff
Model BP791IT

ESPAÑOL

ENGLISH

Omron HEM-670 IT



OMRON

Instruction Manual

Intelli sense®

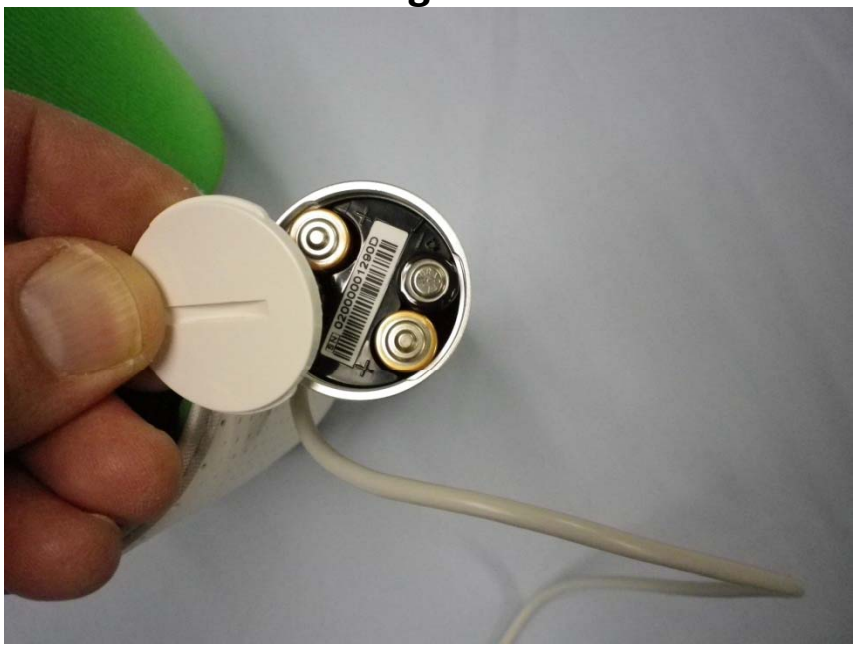
Ultra Premium
Wrist Blood Pressure Monitor
with Advanced Positioning Sensor (APS)
and Omron Health Management Software
Model HEM-670ITCAN

FRANÇAIS

ENGLISH

iHealth BP3

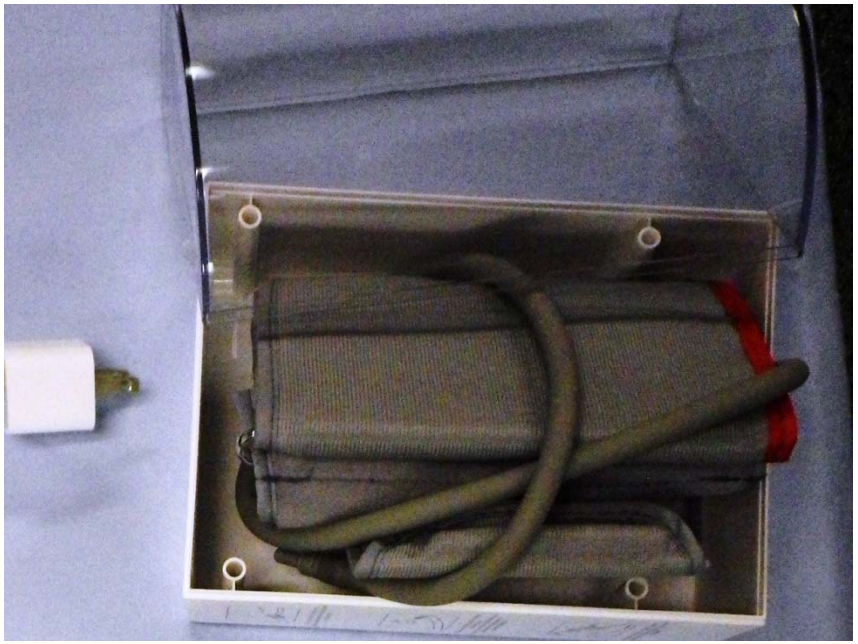
Withings BP-800



Omron BP791 IT

Omron HEM-670 IT

iHealth BP3



Withings BP-800

Omron BP791 IT

Omron HEM-670 IT

New! On the horizon…

iHealth wrist and Bluetooth

iHealth Lab, a subsidiary of China-based Andon Health, just received 510(k) clearance from the FDA for a wrist-worn, Bluetooth-enabled blood pressure monitor called the iHealth BP7 Wireless Blood Pressure Wrist Monitor that will connect with iPhones, iPads, and iPod touch devices. July, 2012

http://mobihealthnews.com/17838/ihealth-to-launch-bluetooth-wrist-worn-blood-pressure-monitor-next/

New! On the horizon…

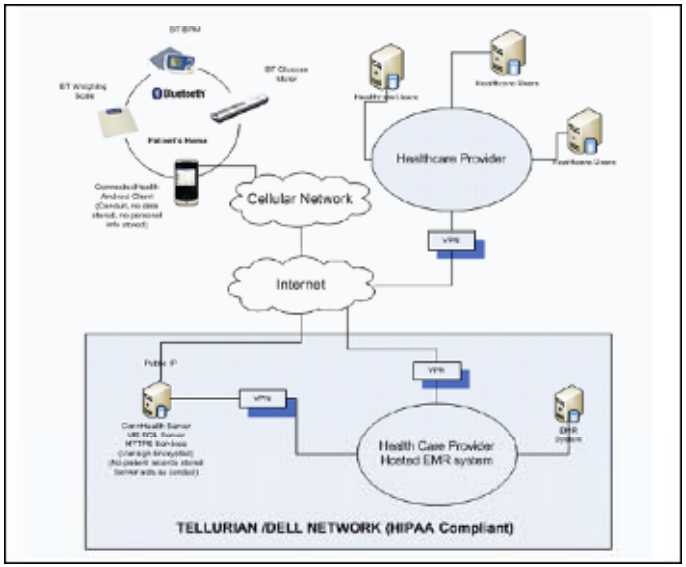
Android

Blood Pressure Monitors planning to integrate with Android application as well.

Android HMA (Health Manager Application "HMA")

The Android HMA is an application developed by ConnectedHealth which will be pre-installed on the Android Phone. The role of the HMA is to act as a gateway routing data from medical devices in the patient's home to a central Electronic Medical Record housed at a secure site, and accessible by the Managed Healthcare organization.

http://www.wirelessdesignmag.com/ShowPR.aspx?PUBCODE=055&ACCT=0000100&ISSUE=1108&RELTYPE=PR&PRODCODE=000000&PRODLETT=GP&CommonCount=0

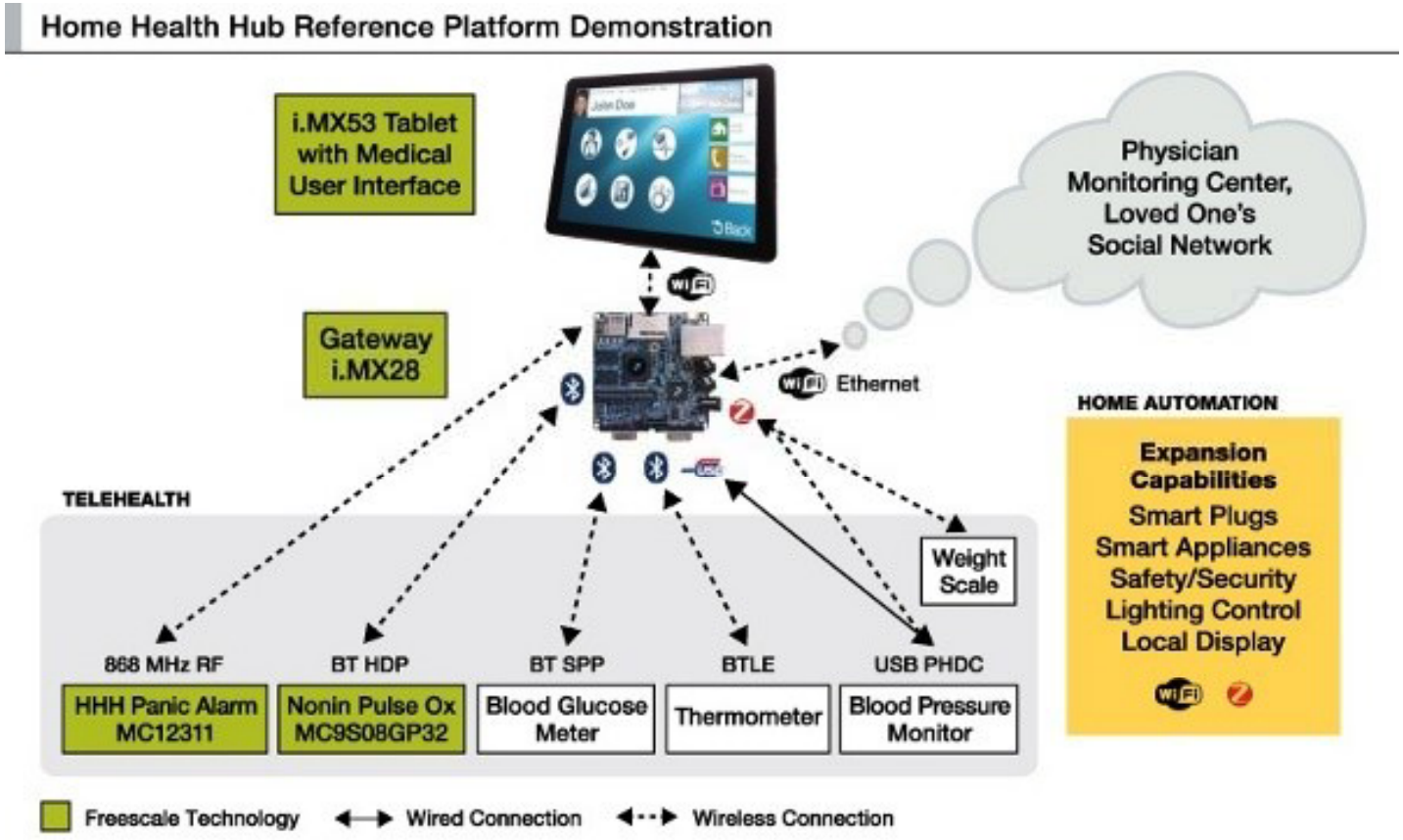


New! On the horizon…

Home Hub (Freescale)

Freescale is working on a connected platform called Home Health Hub (HHH), an i.MX28-based reference platform for others to build on. The ARM9 processor is connected to a host of networking interfaces, including WiFi, Bluetooth (as well as its low-power implementation), Zigbee, sub-1GHz and Ethernet. The Hub will be a central point for connecting various medical devices like blood pressure monitors or glucometers that then feeds data to a tablet.

http://www.engadget.com/2011/11/19/freescale-home-health-hub-wants-to-usher-in-the-era-of-connected/

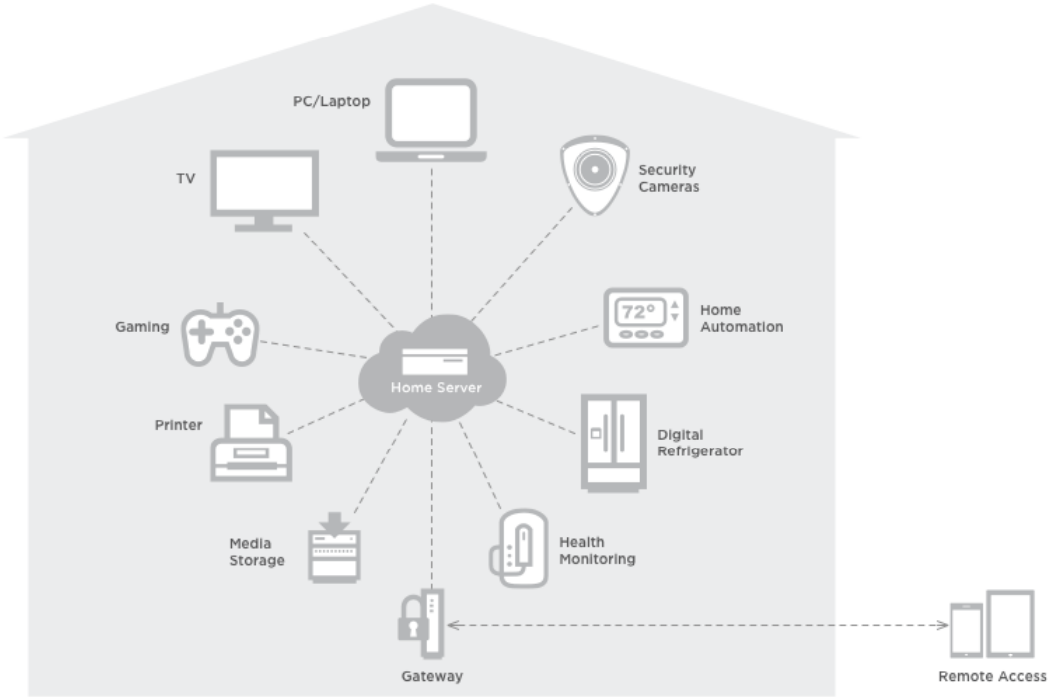


New! On the horizon…

Home Cloud Services (Marvel)

Marvell's Home Server initiative solves this problem by enabling an affordable, low power platform with plug and play installation which connects home digital devices seamlessly and provides easy remote access.

Marvell's total bundle solution – highly integrated SoCs, advanced 802.11n, WI-Fi, G.hn solution, Phy, power management, and switch – make it simple for OEMs to quickly design a system, resulting in faster time to market and reduced development cost



Health Monitoring & Remote Access

New! On the horizon…

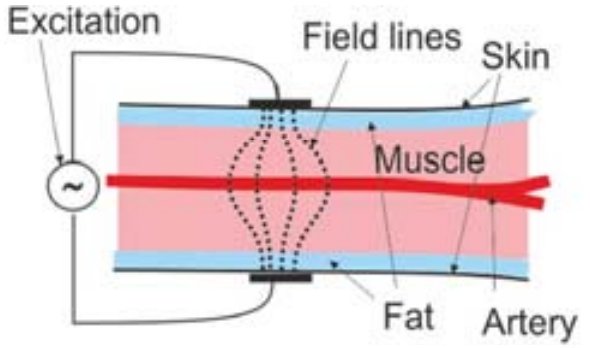
With Home Hubs / Home Cloud Services will BP Monitor devices become just another consumer integrated device?

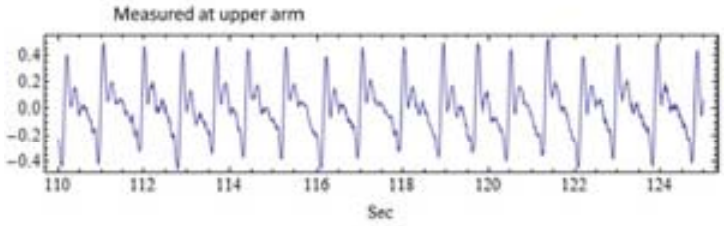
New! On the horizon…

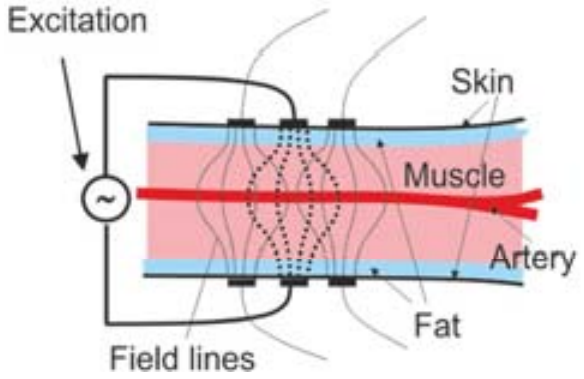
Cuffless Wireless BP Monitoring?

Sense A/S (Taastrup, Denmark) is developing a continuous blood pressure monitor using a patch that has electrodes that sense the changing impedance of tissue around a vessel and convert it into a BP reading. They received $5.9 million from venture fund SEED Capital & Vaekstfonden to help refine this cuffless BP measurement device. Feb. 2012

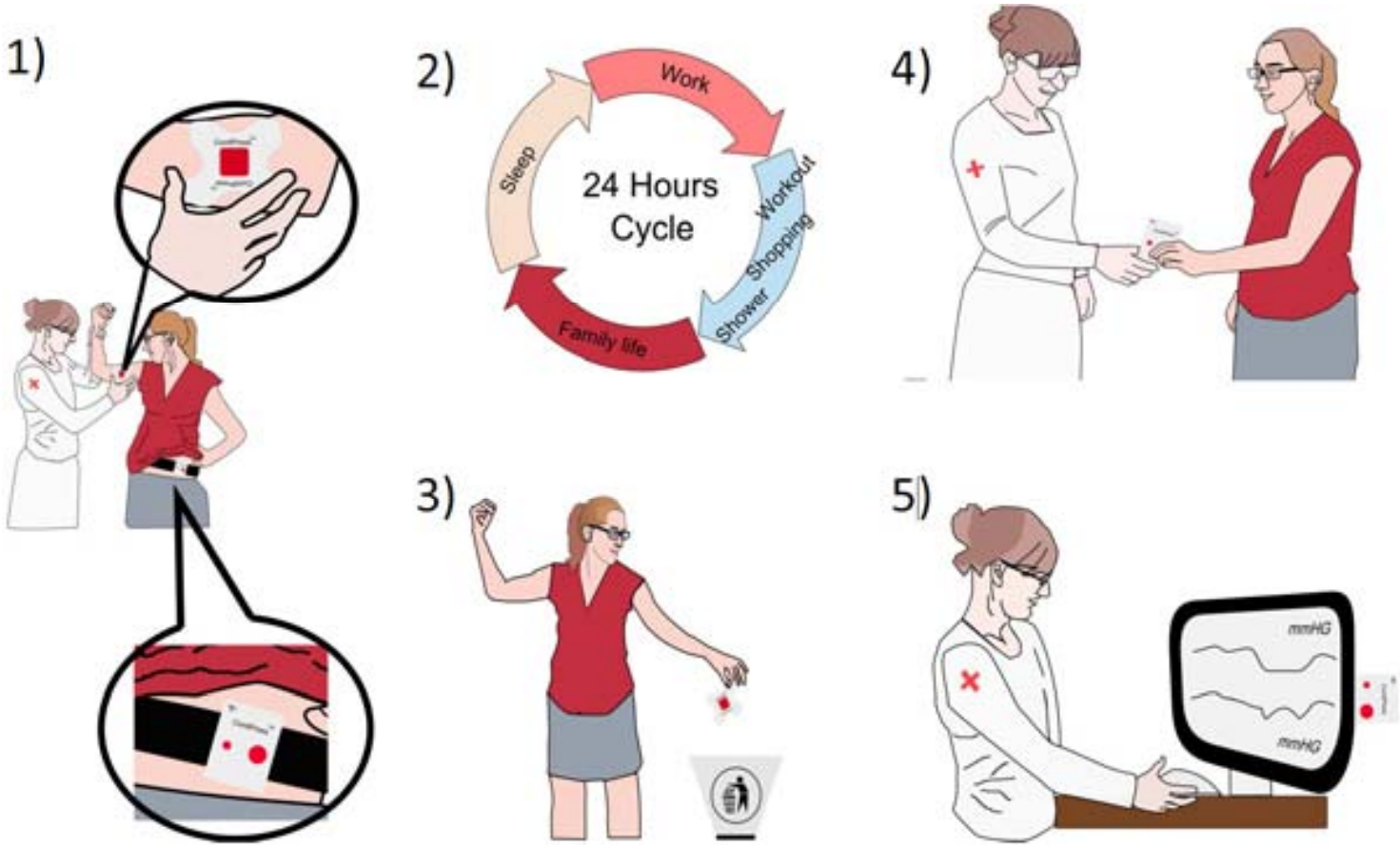
http://medgadget.com/2012/02/new-startup-develops-continuous-blood-pressure-measurement-without-a-counter-pressure-cuff.html







New! On the horizon…

Cuffless Wireless BP Monitoring?

Sense A/S (Taastrup, Denmark) expects to secure FDA 510(K) clearance for the blood pressure measurement device and have it launcheed commercially next year, 2013. http://medgadget.com/2012/02/new-startup-develops-continuous-blood-pressure-measurement-without-a-counter-pressure-cuff.html