

# The Testing Booklet

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**Motivate**  
RA



# Section One

## An Introduction

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### Why are we doing this testing?

In this project we want to see if mobile health (mHealth) technology (i.e. the use of smartphones, wearable technology and smart phone apps to support the delivery of interventions) make it easier for people with rheumatoid arthritis to begin and maintain a more physically active lifestyle.

### What will these tests measure?

These tests will measure your height, weight, waist circumference, blood pressure and physical activity. This booklet will give you detailed instructions on how to take the measures. You will also have support from a member of the research team via phone or video-call, at your request.

### How many times do I need to complete these measurements?

Health assessments will be performed before the start of the study (week 0), mid-way through the programme (week 6), on completion of the programme (week 12), and at a 3-month follow up (week 24).

### What do I do if I can't work the equipment?

You can request a phone call or video-call at any time with a member of the research team. Contact us, either via the website at [www.motivate.ra.com](http://www.motivate.ra.com) or via email [motivate.ra@ljmu.ac.uk](mailto:motivate.ra@ljmu.ac.uk).



# TOP TIPS



Take your measurements in the morning between 6am and 10am. The tests (including questionnaires) should take approximately 1-hour to complete.



Avoid any vigorous-intensity exercise for 24-hours prior to taking your measurements.



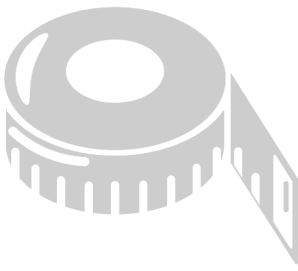
For the tests you need to be fasted. Please do not eat 12 hours before the tests and no caffeine or alcohol for at least 12-hours.



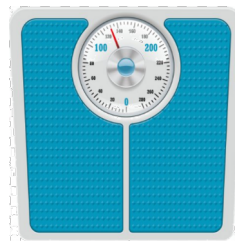
Complete the all the measures in the order set out within the booklet

**What's in the box?**

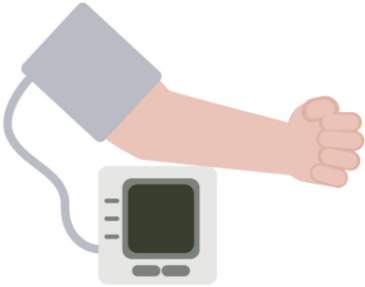




**1** Tape Measure



**2** Scales (if needed)



**3** Blood Pressure Monitor



**4** Physical Activity Monitor



**5** Fitness watch  
(You might not have one of these)



**6** Testing Check List



**7** Pre-Addressed Envelope

# Testing Check List

## YOUR CHECKLIST

### Have you...

- Not eaten for 12 hours
- Had no caffeine or alcohol for 12 hours.
- Not done any vigorous intensity exercise for 24 hours.

### Do you have everything?

- Testing booklet
- Thin, flat object (e.g., a magazine, place mat, iPad)
- Tape measure
- Physical activity monitor
- Scales
- Blood pressure monitor

## INSTRUCTIONS

Refer to the testing booklet for more details on measurements.

### Height

- 1: Do you know your height in cm or feet and inches? If so, enter the measure and skip to #5.
- 2: With bare feet, stand against a wall.
- 3: Place flat object on your head and place a mark at the point where the object meets the wall with the sticker provided.
- 4: Measure the distance from the floor to the sticker with the tape measure.

### Weight

- 5: Place scales on non-carpeted floor and stand on them to measure your weight.

### Waist circumference

- 6: Lift up clothing, then wrap the tape measure around your waist at the level of your belly button.
- 7: Breathe out and record the number at which the end of the tape meets the remaining length. Do this **3 times**.

### Blood pressure

- 8: Empty your bladder and rest for 5 minutes in a seated position before measuring your blood pressure.
- 9: Remove any clothing from your upper arm.
- 10: Wrap the cuff around your upper left arm and place your arm on table or arm rest of a chair
- 11: Press START/STOP. Be still, don't talk and relax throughout the test.
- 12: Repeat this **3 times** with one-minute rest in between measurements.

## RESULTS

Write all your measurements in this box.

Measurements	Results
<input type="checkbox"/> Height	cm/in
<input type="checkbox"/> Weight	kg/lbs
<input type="checkbox"/> Waist Circumference #1	cm/in
<input type="checkbox"/> Waist Circumference #2	cm/in
<input type="checkbox"/> Waist Circumference #3	cm/in
<input type="checkbox"/> Blood Pressure #1	mmHg
<input type="checkbox"/> Blood Pressure #2	mmHg
<input type="checkbox"/> Blood Pressure #3	mmHg

Turn over the page to continue the testing...

If at any time, you wish to speak to a member of the research team, please email

[motivate.ra@ljmu.ac.uk](mailto:motivate.ra@ljmu.ac.uk)

You should have a copy of this sheet in your testing pack. Please work through the check list when carrying out your testing session.

## YOUR CHECKLIST

Refer to the testing booklet for more details on these measurements.

### INSTRUCTIONS continued

#### Physical activity monitoring

- 13: Wear the monitor on your non-dominant wrist (e.g., if you're right-handed, wear it on your left) for the next 7 days.
- 14: After 7 days put the Physical Activity monitor in the provided envelope and post the same day.

#### Questionnaires

- 15: Open the Google Survey link sent to you via email.
- 16: Complete the online questionnaires.

### END OF CHECK LIST

#### Have you...

- Sent off the physical activity monitor in the envelope provided.
- Filled out the online questionnaire and survey.

If at any time, you wish to speak to a member of the research team, please email

[motivate.ra@ljmu.ac.uk](mailto:motivate.ra@ljmu.ac.uk)



# 1. Height

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## TOP TIPS

Choose a good location

- If possible, the floor should be hard, avoid floors with carpets or rugs
- Find a place where you can clearly see a sticker on the wall
- You should be able to stand with your back flat against the wall

### Step 1:



Make sure you have bare feet and are standing against a tall, solid wall.

### Step 2:



Lay a thin, flat object on top of your head e.g. a book

### Step 3:



Whilst holding the book still, place a sticker at the point where the object meets the wall.

### Step 4:



Stand on the tape measure to measure the distance from the floor to the reference point. Make sure the tape measure starts at 0cm.

# 2. Weight

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## TOP TIPS

- Remove shoes and any heavy clothing, such as jeans or a jumper
- Stand with both feet in the center of the scales
- Record the full weight shown on screen (e.g. 86.7kg)

## Step 1:



Place the scales on a flat, firm, non-carpeted surface if possible.

## Step 2:



Make sure take off your shoes and wear as little clothing as possible.

## Step 3:



Step on the scales and stand still whilst the scale measures your weight. Record your weight on the sheet provided.

# 3. Waist Circumference

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## TOP TIPS

- For an accurate reading, exhale before taking the measurement
- The tape measure should be placed just above your belly button
- You will need to measure and record your waist circumference **3 times**

## Step 1:



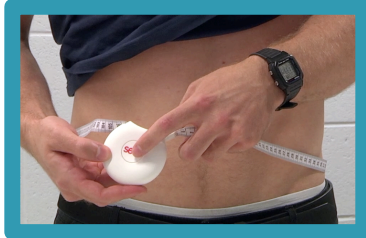
Take the tape measure and wrap it around your stomach, under your clothing.

## Step 2:



Thread the end of the tape measure into the holder

## Step 3:



Press the SECA button to tighten the tape measure

## Step 4:



Place the tape measure just above your belly button and exhale

## Step 5:



Record the number at which the end of the tape meets the remaining length. Repeat **3 times**

# 4. Blood Pressure

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## TOP TIPS

- Go to the toilet and empty your bladder
- Sit upright in a chair, your back against the chair and feet flat on the floor
- Rest in a chair for 5 minutes before measuring your blood pressure.
- Don't talk during the measurement and try to relax
- The machine will show 2 numbers (e.g. 120 and 80) please record both numbers on your sheet



## Step 1:

Plug the black cuff into the white blood pressure monitor



## Step 2:

Remove any clothing from your upper arm and place your arm through the cuff with the wire at the bottom



## Step 3:

Place the cuff just above the elbow and tighten, you should be able to fit a finger between the cuff and your arm



## Step 4:

Press the START/STOP button to begin the measurement. Be still, do not talk and relax throughout the test.



## Step 5:

Repeat this measurement **3 times**, with one-minute rest in between measurements.



# 6. Activity Monitoring

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## TOP TIPS

- Wear the monitor on your non-dominant wrist (e.g. left if you are right-handed)
- Keep on for 7 days
- Remove in the shower, bath or when swimming – but don't forget to put it back on afterwards!

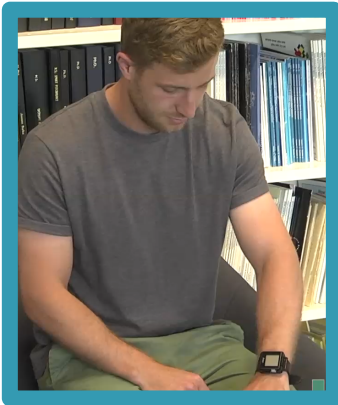
## Step 1:



Place the Physical Activity Watch on your non-dominant wrist e.g. left if you are right handed

*Please note: Don't worry if there is nothing showing on the screen.*

## Step 2:



You will need to wear the Physical Activity Monitor for **7 days**.

## Step 3:



**Envelope 2**

Once you have worn the Physical Activity Monitor for **7 days**, you will need to post it back to us at LJMU.

We have provided a pre-paid envelope in your testing pack (**Envelope 2**).

# Section Three

## The Results

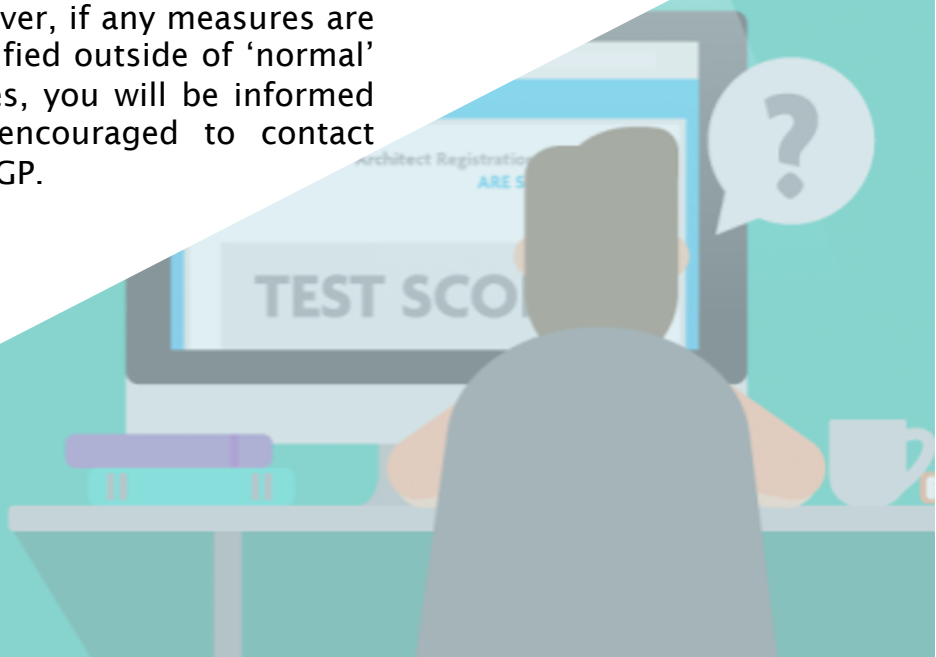
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What do these results mean?

The next section will explain what each measurement is and what your results mean.

Are there any normal values for these measures?

These results are solely being used for research purposes and cannot be used for diagnostic purposes. However, if any measures are identified outside of 'normal' ranges, you will be informed and encouraged to contact your GP.



## Understanding body fat

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Everyone needs some fat to stay healthy. But too much fat, particularly around the waist, puts your health at risk.

We have different types of fat in the body. Subcutaneous fat sits just below the skin, so we can often feel it. This is the kind of fat people tend to worry about. But actually it's the hidden fat wrapped around your organs, called visceral fat, that's the bigger health risk.

A larger waist measurement is often a sign if you have too much visceral fat.

## How do I know if I'm overweight?

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When you know your height and weight, follow the lines on the chart to find out your Body Mass Index (BMI).

As you may know, being overweight or obese increases your risk of a number of diseases such as type 2 diabetes or some types of cancer.

## Know your body shape

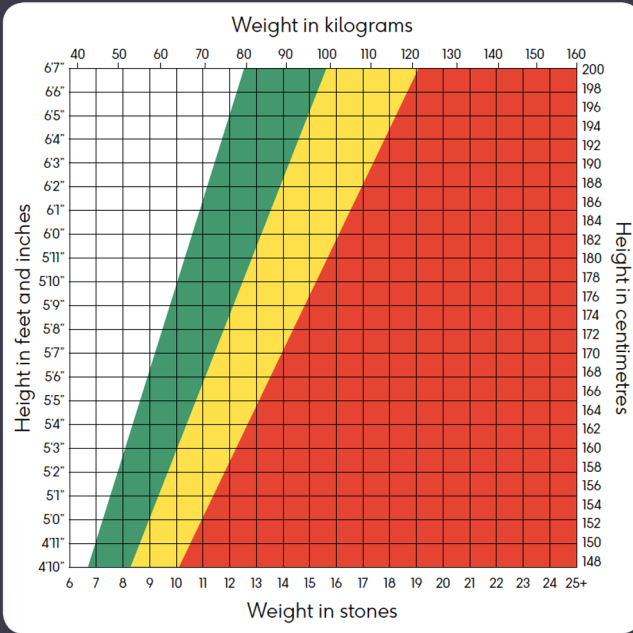
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Regardless of your BMI, you should try to lose weight if you have a high waist circumference.

This is because your risk of getting some health problems is affected by where you store your body fat, as well as your weight.

Carrying too much fat around your middle (waist) can make it more likely for you to have conditions such as heart disease or a stroke.

# Find out your BMI



**Underweight**  
BMI below 18.5

**Ideal Weight**  
BMI 18.5-24.9

**Overweight**  
BMI 25-29.9

**Obese**  
BMI above 30

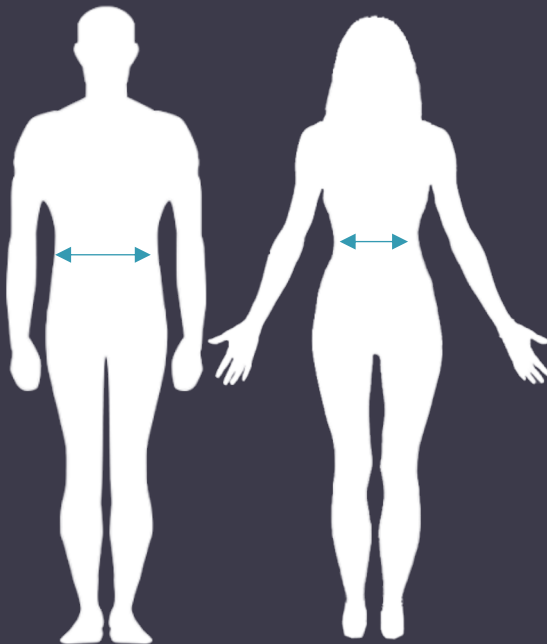
# Waist to hip ratio

## Men

Low: 94cm or lower

Medium: 94-102cm

High: 102cm or higher



## Women

Low: 80cm or lower

Medium: 80-88cm

High: 88cm or higher

## What is blood pressure?

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Your heart pumps blood around your body to deliver oxygen and nutrients to your organs. Your blood pressure is the force your heart uses to pump blood around your body through the arteries.

You need some pressure to keep your blood moving. Your blood pressure naturally goes up and down, and it's fine for it to go up while you're moving about. It's when your overall blood pressure is always high, even when you are resting, that you need to do something about it.

## How is my blood pressure measured?

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When you have your blood pressure measured, your reading is written as two numbers. The first is when the pressure is at its highest (or systolic pressure), and the second at its lowest (or diastolic pressure). For example, your reading will be something like: 135/85 mmHg. mmHg is a unit for measuring blood pressure.

***Systolic pressure:*** This is the highest level of your blood pressure – when your heart beats, it contracts to pump blood through your arteries.

***Diastolic pressure:*** This is the lowest level of your blood pressure – when your heart relaxes between beats.

## What is high blood pressure?

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High blood pressure means that your heart has to work harder to pump blood around your body, so the pressure is always higher than it should be.

High blood pressure is serious. If you ignore it, it can lead to heart and circulatory diseases like heart attack or stroke. It can also cause kidney failure, heart failure and problems with your sight.

# Blood Pressure Results

**Normal**

below  
**120**

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below  
**80**

**Elevated**

**120**  
to  
**129**

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below  
**80**

**High**

Stage 1	Stage 2
<b>130</b> to <b>139</b>	<b>140</b> or above
<hr/>	<hr/>
<b>80</b> to <b>89</b>	<b>90</b> or above

also called  
*Hypertension*



If your blood pressure was over 180/120mmHg please seek medical advice and then contact a member of the research team



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