

# Pulse

Your pulse is what you feel over an artery as the pressure inside increases following each heart beat.

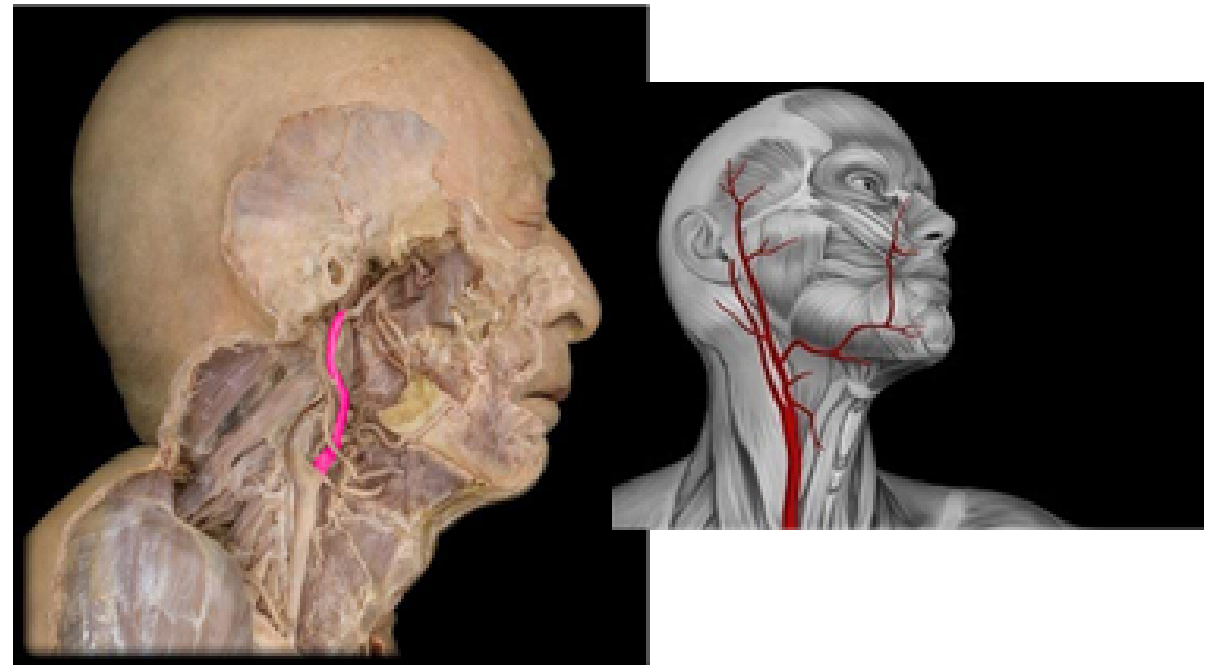
Your pulse refers both to the physical thump created in your arteries by the contraction of your heart muscles, and the number of these thumps your heart causes per minute.



You have 7 pulse points on your body. You are going to use the stethoscope to try and find each pulse point on a partner's body.

# Pulse Point 1

Carotid Artery  
(Neck)



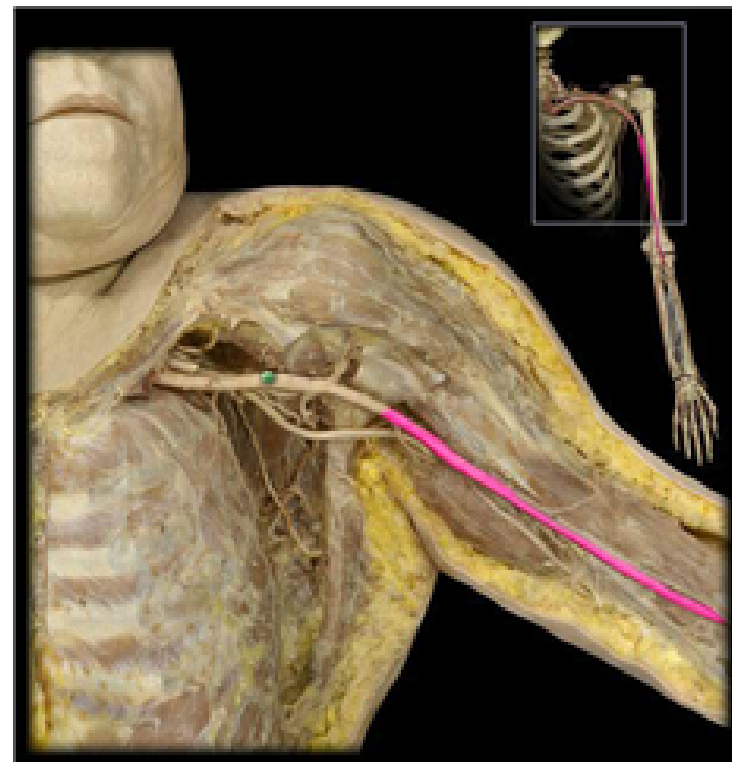
## Pulse Point 2

Radial Artery  
(Wrist)



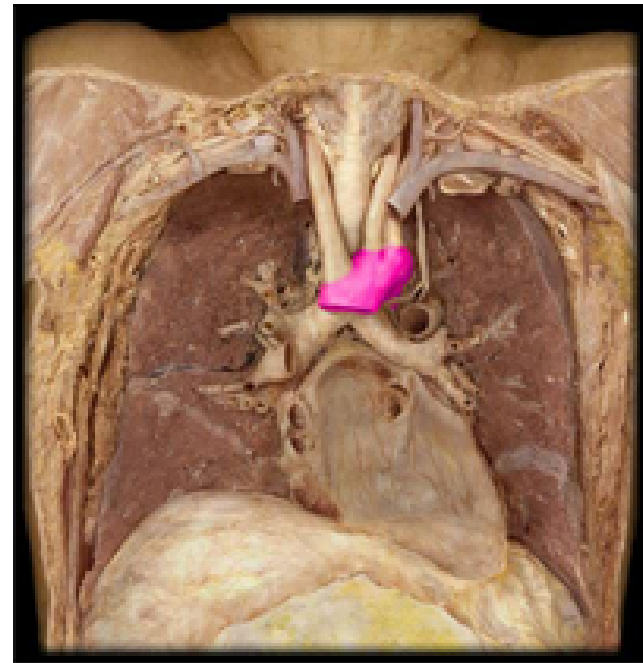
# Pulse Point 3

Brachial  
(Upper Arm)



# Pulse Point 4

Aortic Arch  
(Chest)



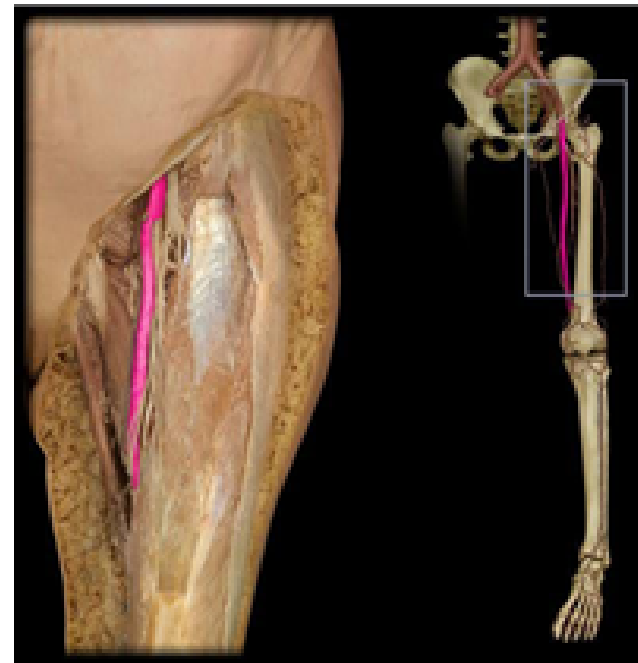
## Pulse Point 5

Popliteal  
(Behind the Knee)



# Pulse Point 6

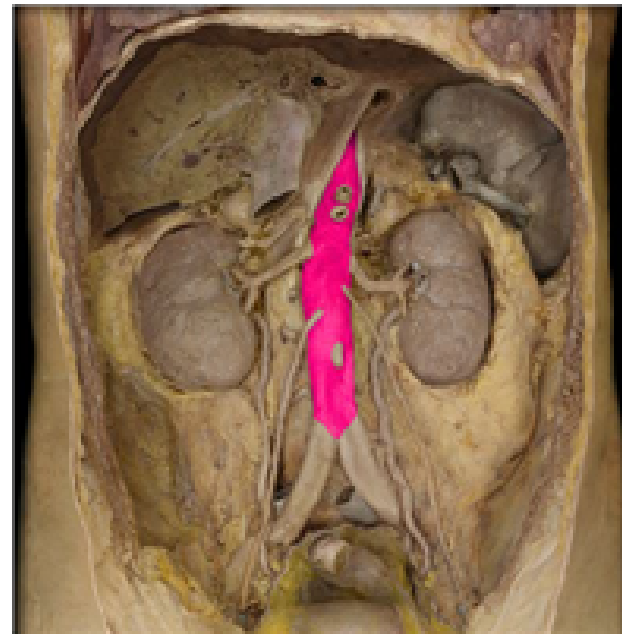
Femoral  
(Thigh)





# Pulse Point 7

Abdominal  
(Tummy)



## Pulse Cont.

The most common and easiest place to take your pulse is at the radial artery.

Find your pulse on your wrist. Use your first two fingers only. Your thumb may pick up a pulse sensation and throw off your count.



# Pulse is measured in Beats Per Minute (BPM)



If you count beats for 10s multiply by 6  
If you count beats for 15s multiply by 4  
If you count beats for 30s multiply by 2  
Best choice: Count beats for 1 minute

Find your neighbor's pulse. Ready...go!

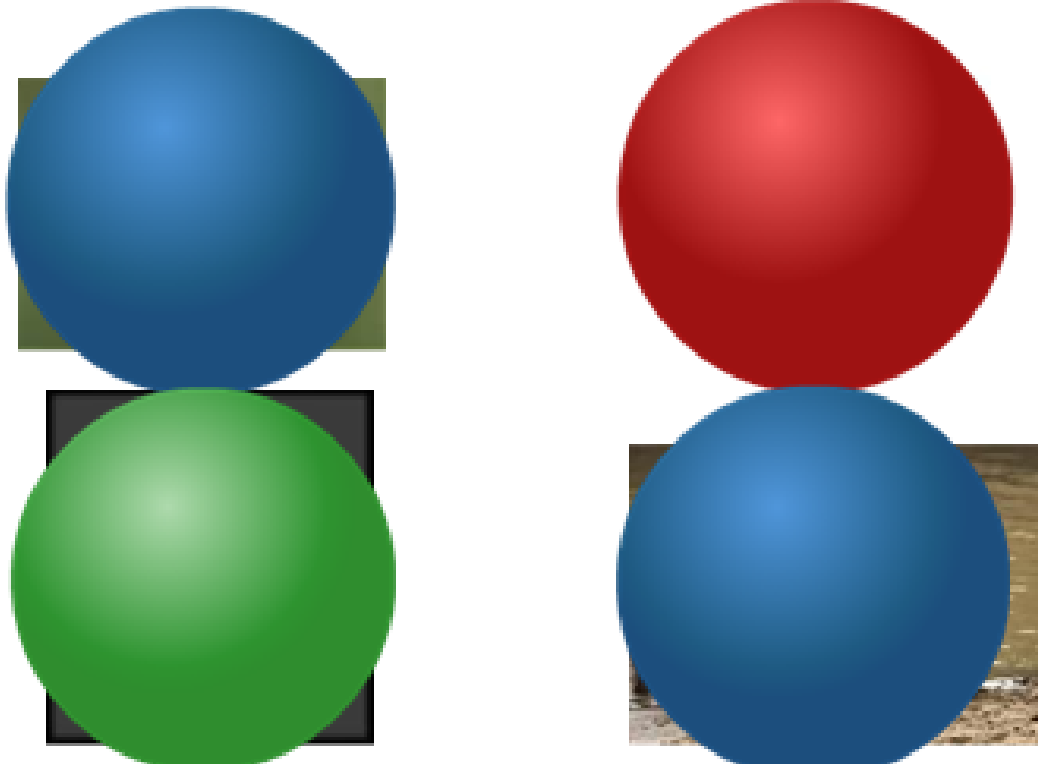
Your pulse when you are 'at rest' is called your 'resting heart rate'. A normal resting heart rate for someone your age is...

Notice how the more physically fit you are, the lower your BPM. We want our resting heart rate to be low because it means your heart is very efficient and not overworking.

| MEN      |        |        |        |         |        |       |
|----------|--------|--------|--------|---------|--------|-------|
| AGE      | 18 -25 | 26 -35 | 36 -45 | 46 - 55 | 56 -65 | 65+   |
| ATHLETE  | 49-55  | 49-54  | 50-56  | 50-57   | 51-56  | 50-55 |
| EXCEL'T  | 56-61  | 55-61  | 57-62  | 58-63   | 57-61  | 56-61 |
| GOOD     | 62-65  | 62-65  | 63-66  | 64-67   | 62-67  | 62-65 |
| ABOVE AV | 66-69  | 66-70  | 67-70  | 68-71   | 68-71  | 66-69 |
| AVERAGE  | 70-73  | 71-74  | 71-75  | 72-76   | 72-75  | 70-73 |
| BELOW AV | 74-81  | 75-81  | 76-82  | 77-83   | 76-81  | 74-79 |
| POOR     | 82+    | 82+    | 83+    | 84+     | 82+    | 80+   |

| WOMEN    |        |        |        |         |        |       |
|----------|--------|--------|--------|---------|--------|-------|
| AGE      | 18 -25 | 26 -35 | 36 -45 | 46 - 55 | 56 -65 | 65+   |
| ATHLETE  | 54-60  | 54-59  | 54-59  | 54-60   | 54-59  | 54-59 |
| EXCEL'T  | 61-65  | 60-64  | 60-64  | 61-65   | 60-64  | 60-64 |
| GOOD     | 66-69  | 65-68  | 65-69  | 66-69   | 65-68  | 65-68 |
| ABOVE AV | 70-73  | 69-72  | 70-73  | 70-73   | 69-73  | 69-72 |
| AVERAGE  | 74-78  | 73-76  | 74-78  | 74-77   | 74-77  | 73-76 |
| BELOW AV | 79-84  | 77-82  | 79-84  | 78-83   | 78-83  | 77-84 |
| POOR     | 85+    | 83+    | 85+    | 84+     | 84+    | 84+   |

The smaller the animal, the faster the heart beat. This is because blood needs to travel a shorter distance and in turn the heart needs to beat more often.



Which  
would  
have a  
higher  
heart rate?

Maximum Heart Rate (MHR) is the fastest rate at which your heart will be in one minute.

There is no one-size-fits-all number but as an average we use 220-age.

So a 17 year old's maximum heart rate will be 203bpm.



\*\*\* For those interested (we'll refer to 220-age for this class but just in case you care) a more accurate formula, offered in a study published in the journal, *Medicine & Science in Sports & Exercise*, is  $206.9 - (0.67 \times \text{age})$

In physical exercise we use the maximum heart rate to find 'target heart rate' (THR). This is the range of BPM that you should exercise in to get cardio benefits. To get your target heart rate, take 60-80% of your MHR.

ex. A 17 year old has a MHR of 203

$$203 \times .60 = 122$$

$$203 \times .80 = 163$$

So a 17 year old, on average, should be working out in a range of 122-163 BPM to benefit from exercise.

A lot of fitness professionals would say...

If you are working on burning fat, exercise in the low end of your target heart rate.

If you are working on getting in better 'shape' workout in the higher end of your target heart rate.

Or...even better use interval training to do both!!!

