



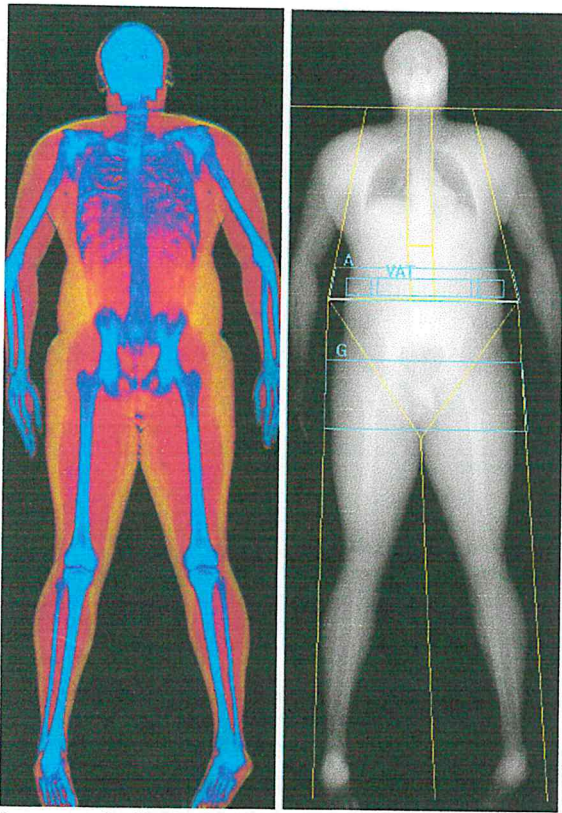
**T** 0207 459 4219  
**E** [info@myvitalmetrics.com](mailto:info@myvitalmetrics.com)  
**W** [www.myvitalmetrics.com](http://www.myvitalmetrics.com)

Telephone: 01443 483555

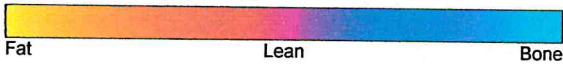
E-Mail: sarah.morgan@southwales.ac.uk

Sex: Male  
Ethnicity: White

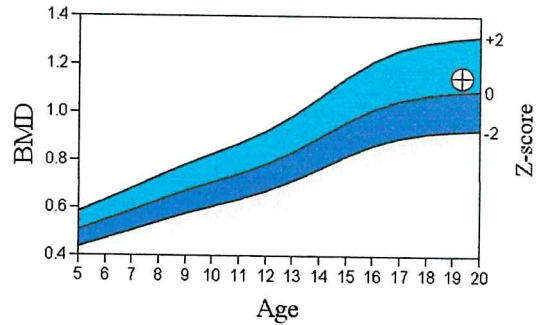
Height: 182.0 cm  
Weight: 115.9 kg  
Age: 19



Images not for diagnostic use

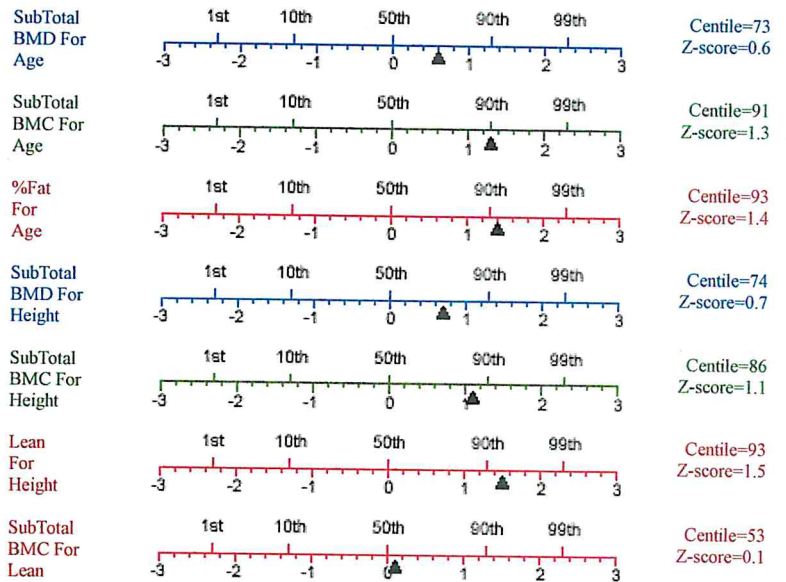


**Subtotal**



Source: 2012 BMDCS

**Exam Date: 25 February 2026**



**DXA Results Summary:**

Region	Fat Mass (g)	Lean Mass (g)	% Fat	BMC (g)	BMD (g/cm <sup>2</sup> )
L Arm	1753	4648.2	26.5	223.82	0.848
R Arm	1842	4839.3	26.6	248.00	0.909
Trunk	16668	37040.5	30.5	912.99	
L Leg	7437	13059.2	35.2	641.64	1.305
R Leg	7541	13035.3	35.6	618.27	1.316
Subtotal	35241	72622.5	31.9	2644.72	1.145
Head	1346	3812.8	23.8	504.10	2.183
<b>Total</b>	<b>36587</b>	<b>76435.3</b>	<b>31.5</b>	<b>3148.82</b>	<b>1.239</b>
Android (A)	2995		37.4		
Gynoid (G)	6026		34.2		

Scan ID: A02252609  
 Scan Type: a Whole Body  
 Analysis: 25 February 2026 14:36 Version 13.6.1.3  
 Auto Whole Body Fan Beam  
 Operator: SJB  
 Model: Horizon A (S/N 100101)

**Bone Density Explanatory Notes**

**What is Bone Density?:**  
 Bone density is a measure of how much calcium your bones contain (in grams) for their overall size (in cm<sup>2</sup>). In general the greater your bone density, the stronger your bones are, and the less likely they will fracture when faced with an accident or fall.

**What do the measurements mean?**

We measure a number of things when we measure bone density with a DEXA. The First column above is the total area of bone - this gives you the overall size. Taller and broader people will have larger bones overall. This area is measured in (in cm<sup>2</sup>). Next we measure the weight of the bones. this is measured in grams. Finally - the bone density is a calculation from these:

$$\text{Bone Mineral Density (BMD)} = \frac{\text{Weight of bones (g)}}{\text{Size of bones (cm}^2\text{)}}$$

**What do the numbers mean**

Each area of the body: Legs, Pelvis, Lumbar Spine, Thoracic Spine, Ribs and Arms will have their own bone density, but these figures are then converted into a single figure. Everyone gets something called a Z-Score, and certain populations get an additional figure called a T-Score. Z- and T-scores are expressed in terms of variations from the average, in Standard Deviation Units. This means that 66% of the population will get a score between -1.0 and 1.0, and 95% of the population will get a score between -2.0 and 2.0.

**Z-Score**

This measures your bone density and compares it to other people your age, sex and ethnicity. Any score of > -1.0 is considered normal. If it is less than -1.0 we may start to recommend remedial action to improve it.

**T-Score**

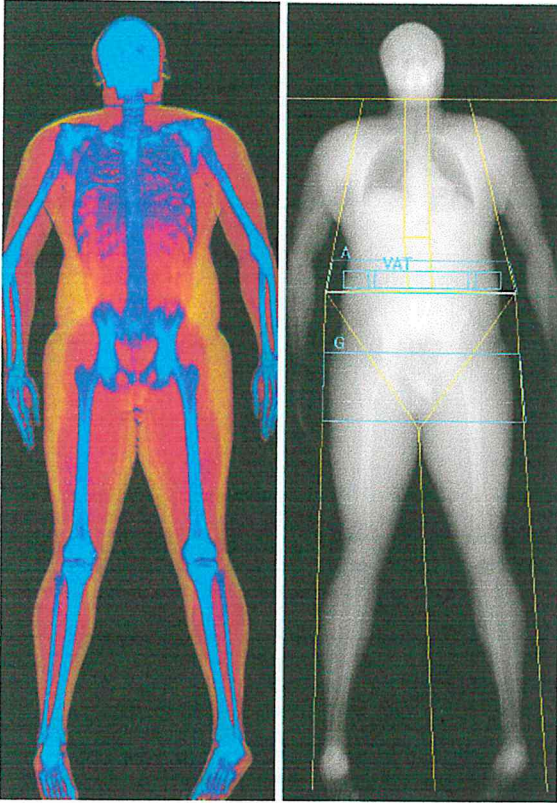
This measures your bone density and compares it to that of a healthy 30-year-old. Only some populations will get a T-Score. T-Scores of less than -1.5 may indicate a problem with bones and we'll discuss this with you. A score less than 2 might be worth showing your doctor.

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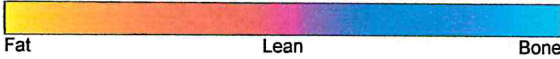
E-Mail: sarah.morgan@southwales.ac.uk

Sex: Male  
Ethnicity: White

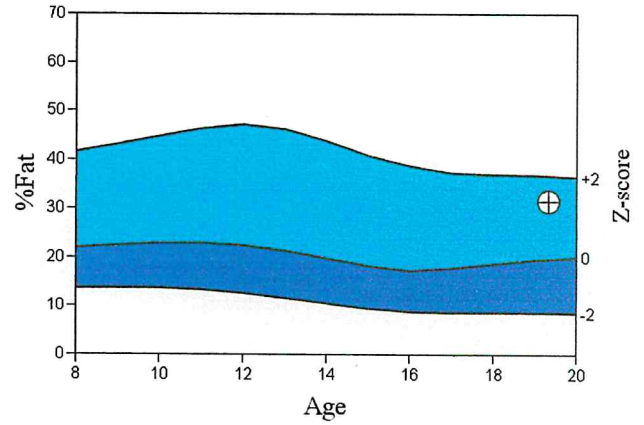
Height: 182.0 cm  
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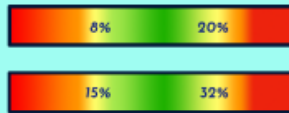
### Total Body % Fat



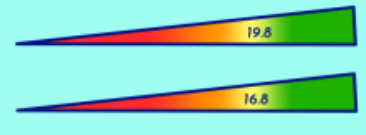
Source: NHANES Classic White Male.

### BodyFat Ideal Ranges

(American Council on Exercise)



### Lean Index Ideal Ranges



### Visceral Fat

#### Cardiovascular Risk



#### Actions



### Body Composition Results

Region	Fat Mass (g)	Lean + BMC (g)	Total Mass (g)	% Fat	% Fat T-score	% Fat Z-score
L Arm	1753	4872	6625	26.5		1.2
R Arm	1842	5087	6929	26.6		1.2
Trunk	16668	37954	54621	30.5		1.3
L Leg	7437	13701	21138	35.2		1.7
R Leg	7541	13654	21194	35.6		1.7
Subtotal	35241	75267	110508	31.9		1.4
Head	1346	4317	5663	23.8		
<b>Total</b>	<b>36587</b>	<b>79584</b>	<b>116171</b>	<b>31.5</b>		<b>1.4</b>
Android (A)	2995	5014	8009	37.4		
Gynoid (G)	6026	11593	17619	34.2		

Measure	Result	T-score	Z-score
Total Body % Fat	31.5		1.4
Fat Mass/Height <sup>2</sup> (kg/m <sup>2</sup> )	11.0		1.6
Android/Gynoid Ratio	1.09		
% Fat Trunk/% Fat Legs	0.86		0.2
Trunk/Limb Fat Mass Ratio	0.90		0.1
Est. VAT Mass (g)	384		
Est. VAT Volume (cm <sup>3</sup> )	415		
Est. VAT Area (cm <sup>2</sup> )	79.6		

### Lean Indices

Measure	Result	T-score	Z-score
Lean/Height <sup>2</sup> (kg/m <sup>2</sup> )	23.1		1.2
Appen. Lean/Height <sup>2</sup> (kg/m <sup>2</sup> )	10.7		1.2

Est. VAT = Estimated Visceral Adipose Tissue

Sex: Male  
 Ethnicity: White

Height: 182.0 cm  
 Weight: 115.9 kg  
 Age: 19

**Scan Information:**

**Key Figures - Definitions and Explanations**

**Body Fat:**

Body Fat is expressed as a percentage below and on the previous page. It is also expressed as a total figure in grams below. Each body part has a Body Fat % as well as a total figure. We should note that:

-Body Fat % is a calculation where the total mass of fat is divided by the total mass.

Therefore 
$$\text{Bodyfat} = \frac{\text{Total Fat Mass}}{\text{Total Mass}}$$

-The Body Fat % of the skull is fixed at 20% as neither energy of the DEXA X-Ray can penetrate the skull

**Android and Gynoid Fat:**

**Android Fat** is the subcutaneous fat that accumulates around the midsection. It is called 'Android' because this is typically where men tend to put on more fat. Higher levels of Android fat relative to Gynoid fat is typical in men. When Android fat is higher in women, this may suggest further analysis is required to rule out hormonal disregulation

**Gynoid Fat** is the subcutaneous fat that accumulates around the buttocks and thighs. It is called 'Gynoid' because this is typically where women tend to put on more fat. Higher levels of Gynoid fat relative to Android fat is typical in women, but not atypical in men either. When Gynoid fat is very significantly higher than Android fat in men, this may suggest further analysis is required to rule out hormonal disregulation.

$$\text{A:G Ratio} = \frac{\text{Android Fat \%}}{\text{Gynoid Fat \%}}$$

**Visceral Fat:**

Visceral Fat is the fat that accumulates around the organs. You cannot see it, feel it or touch it. It is also not necessarily proportional to your overall fat levels and so it can be difficult to know what your visceral fat is doing. Visceral fat has been identified as being particularly dangerous, and high levels are very closely correlated to cardiovascular risk. Visceral fat on the DEXA Report is listed as 3 different values: mass, volume, and area. Most studies reference area, and provide the following reference values:

- Visceral Fat < 100cm<sup>2</sup> = Normal*
- Visceral Fat > 100cm<sup>2</sup> < 160cm<sup>2</sup> = Increased Risk*
- Visceral Fat > 160cm<sup>2</sup> = High Risk*

**Lean Index:**

The Lean index (listed as "Lean/Height<sup>2</sup>") is a measure of how much lean mass you have for your height. Lean Mass is incredibly important for everyone as greater lean mass means greater strength to do the things you need to do every day. As we get older, particularly into our 40s and beyond, unless prevented through resistance exercise, we will lose lean mass at an increasing rate. This process is called sarcopenia. When lean mass deteriorates beyond a certain point, everyday actions like getting up out of a chair can become challenging. For this reason we recommend a minimum lean mass index for most people of the following:

- Men: >19.8
- Women: >16.8

Region	BMC (g)	Fat Mass (g)	Lean Mass (g)	Lean + BMC (g)	Total Mass (g)	% Fat
L Arm	223.82	1753.4	4648.2	4872.0	6625.4	26.5
R Arm	248.00	1841.7	4839.3	5087.3	6929.0	26.6
Trunk	912.99	16667.8	37040.5	37953.5	54621.3	30.5
L Leg	641.64	7437.2	13059.2	13700.8	21138.0	35.2
R Leg	618.27	7540.9	13035.3	13653.5	21194.4	35.6
Subtotal	2644.72	35240.9	72622.5	75267.2	110508.1	31.9
Head	504.10	1345.6	3812.8	4316.9	5662.5	23.8
<b>Total</b>	<b>3148.82</b>	<b>36586.5</b>	<b>76435.3</b>	<b>79584.1</b>	<b>116170.7</b>	<b>31.5</b>