

This report measures spinal shape and alignment from your X-rays. Numbers are compared with published reference values. These are structural measurements only — they do not diagnose a condition.

PATIENT	PATIENT ID	DOB	AGE
Sample Patient	Sample	Withheld	Withheld
GENDER	STUDY DATE	REFERRING PHYSICIAN	MODALITY
Withheld	Withheld	Withheld	DX

DATA QUALITY

No reason for examination was recorded, so findings are not correlated to symptoms.

Facing direction describes how the patient is oriented in this image. It does not refer to the left or right side of the body.

Reason for Examination

Not Mentioned

What This Report Shows

This report measures the shape and alignment of your cervical spine (neck) from 1 X-ray image. A computer placed measurement guides on each vertebra and compared 19 measurements against published reference values.

Of the 19 measurements taken, 6 are within reference range, 8 show mild or moderate deviation, and 5 show significant deviation.

These are structural measurements only. They do not diagnose a condition and they were not compared against any reported symptoms.

This report measures the shape and alignment of your lumbar spine (lower back) from 1 X-ray image. A computer placed measurement guides on each vertebra and compared 24 measurements against published reference values.

Overall curve: your lower back curve measures LL1 37.32°, compared with a reference of predictedLL 43.80° for your pelvic incidence of 63.50°. Your curve is 6.48° flatter than the reference value calculated for your own pelvic shape.

Of the 24 measurements taken, 6 are within reference range, 10 show mild or moderate deviation, and 8 show significant deviation.

These are structural measurements only. They do not diagnose a condition and they were not compared against any reported symptoms.

Measurement Methodology

Analysis Protocol

Digital measurement tools place guides on each vertebra. Reference values come from published averages. Each analysis tool measures independently.

Severity Classification by Color Code

Within reference range— At or near the published reference value.

Mild— Small deviation from the reference value.

Moderate— Clearer deviation; worth reviewing with your provider.

Significant— Well outside the reference range; review with your provider is recommended.

Normal Reference View



Measured Overlay



Green lines are the measurement guides the AI placed. The red line traces the overall curve.
The side marker may appear reversed in this image because of how the source image was captured and displayed.

Section Snapshot

Lumbar spine (lower back): 24 scored measurements (6 within range, 7 mild, 3 moderate, 8 significant).
18 key findings identified from this view.

Chapter summary

Every measurement taken for this region, grouped by deviation from its reference value.

6	7	3	8
Within range	Mild	Moderate	Significant

Largest deviations from reference

- L2 - L3 — 14.20° (reference 6.30°, 7.90° above) — more movement than expected at this level
- L3 - L4 — 16.30° (reference 9.10°, 7.20° above) — more movement than expected at this level
- L5 - S1 — 11.20° (reference 33.00°, 21.80° below) — less movement than expected at this level
- T12 Translation to S1 — 63.8 mm (reference 0.00 mm, 63.76 mm above) — further from the reference position
- L5 - S1 shift — 10.00 mm (reference 0.00 mm, 10.00 mm above) — this vertebra sits 10.0mm forward of the one below it

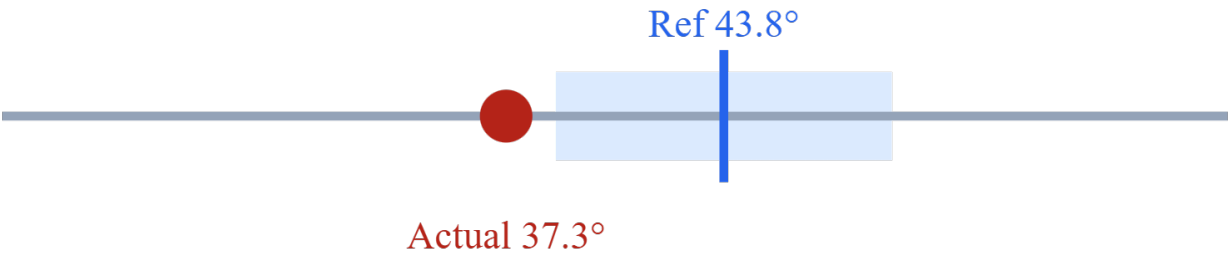
Several measurements fall well outside the reference range. Review with your provider is recommended.

The overall curve

Your pelvic shape (API) **63.50°** ! Reference curve for that shape (PLL): **43.80°** Your actual curve (LL) **37.32°** Difference: **"6.48"**
Your curve is 6.48° flatter than the reference value calculated for your own pelvic shape.

This reference is calculated from your own pelvic geometry rather than a population average, so it is individual to you.

Curve goal vs actual



Balance and load

Measurement	Value	Reference	Status	Meaning
Sacral Base Angle	38.00°	40°	Within range	The tilt of the surface your spine sits on.
T12 Slope	27.27°	25°	Mild	The tilt of the vertebra at the top of your lower back.
T12 Translation to S1	63.8 mm	0mm	Significant	How far the top of your lower back sits forward or behind your sacrum.

Movement and position, level by level

What it is The angle and shift between one vertebra and the one directly below it, level by level.

Why it matters The overall curve is the sum of these individual levels. This shows where your curve is shared evenly and where it is concentrated.

Level	Bend	Angle	Reference	Shift (signed)	Direction	Cumulative offset	Share of curve	Status
T11 - T12†	Flexion (reversed)	Flexion 5.90° (reversed)	7°	-1.5 mm	Forward	-1.5 mm	—	Significant
T12 - L1†	Flexion (reversed)	Flexion 2.30° (reversed)	0°	+1.7 mm	Backward	+0.2 mm	—	Significant
L1 - L2	Extension	4.90°	5.1°	+1.9 mm	Backward	+2.1 mm	—	Within range
L2 - L3	Extension	14.20°	6.3°	+0.9 mm	Backward	+3.0 mm	—	Significant
L3 - L4	Extension	16.30°	9.1°	+3.0 mm	Backward	+6.0 mm	—	Significant
L4 - L5	Extension	21.10°	18.5°	+3.7 mm	Backward	+9.7 mm	—	Mild
L5 - S1	Extension	11.20°	33°	-10.0 mm	Forward	-0.3 mm	—	Significant

Severity by level

T11 - T12

Significant

T12 - L1

Significant

L1 - L2

Within range

L2 - L3

Significant

L3 - L4

Significant

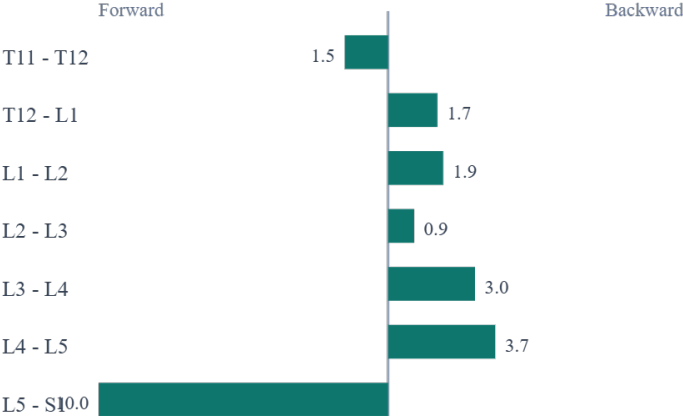
L4 - L5

Mild

L5 - S1

Significant

Vertebral shift (mm)



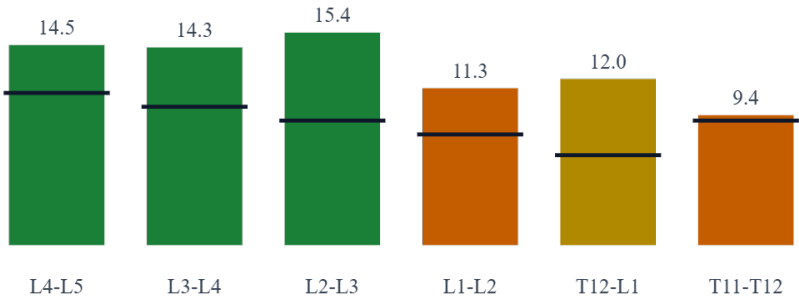
Disc spaces, level by level

What it is Disc height is the cushion height between bones. The ratio compares that height to nearby bone height.

Why it matters Discs act as spacers and shock absorbers. The ratio is usually the most reliable comparison across people and image scaling.

Level	Height	Reference height	Height-to-body ratio	Reference ratio	Status
L4-L5	14.46 mm	11 mm	39.7%	40%	Within range
L3-L4	14.29 mm	10 mm	38.4%	40%	Within range
L2-L3	15.36 mm	9 mm	39.9%	40%	Within range
L1-L2*	11.34 mm	8 mm	29.2%	40%	Moderate
T12-L1*	12.01 mm	6.5 mm	33.4%	40%	Mild
T11-T12*	9.39 mm	9 mm	28.2%	40%	Moderate

Disc height (mm)



0 of 6 disc spaces measured at or above the reference proportion; 0 showed thinning; 0 showed collapse. The narrowest was T11-T12 at 28.2%.

What it is Position shifts along the back edge (and front edge for lumbar) between neighboring vertebrae.

Why it matters A step in these lines means one bone sits offset from the one below it, changing how load passes through that level.

Level	Back-of-body line	Direction	Front-of-body line
T11 - T12	1.5 mm	Forward	—
T12 - L1	1.7 mm	Backward	—
L1 - L2	1.9 mm	Backward	—
L2 - L3	0.9 mm	Backward	—
L3 - L4	3.0 mm	Backward	—
L4 - L5	3.7 mm	Backward	—
L5 - S1	10.0 mm	Forward	—

Data completeness and provenance

24 measurements were compared with reference values across 7 measured levels (T11 - T12, T12 - L1, L1 - L2, L2 - L3, L3 - L4, L4 - L5, L5 - S1). 6 disc levels also had reference comparisons.

Measurements in this section are reported in °, mm.

LL1 37.32° across L1–L5 vs summed segment angles 56.50° over the same span (difference -19.18°).

Reference source table

Metric key	Unit	Reference used
API	°	56.00
L_Disc_Height	mm	9.00
L_Disc_Height_L1_L2	mm	8.00
L_Disc_Height_L2_L3	mm	9.00
L_Disc_Height_L3_L4	mm	10.00
L_Disc_Height_L4_L5	mm	11.00
L_Disc_Height_T12_L1	mm	6.50
L_Translations	mm	0.00
L1-L2	°	5.10
L2-L3	°	6.30
L3-L4	°	9.10
L4-L5	°	18.50
L5-S1	°	33.00
LLSacralBase	°	40.00
T11-T12	°	0.00
T12-L1	°	0.00
T12Slope	°	25.00
T12Trans	mm	0.00

Provenance

Orientation	RIGHT
Image dimensions	711 x 1000 px
View context	Structured section generated from measured values
Generated at	Withheld

LL Curve Angle: 45.00°

† Marked as a significant deviation because this segment bends in the opposite direction to the expected curve, regardless of the size of the angle.

* Height and height-to-body ratio disagree for this level; the more conservative reading is shown.

Your baseline for future comparison

This is your first analysis. These measurements will serve as the comparison point for any future X-rays.

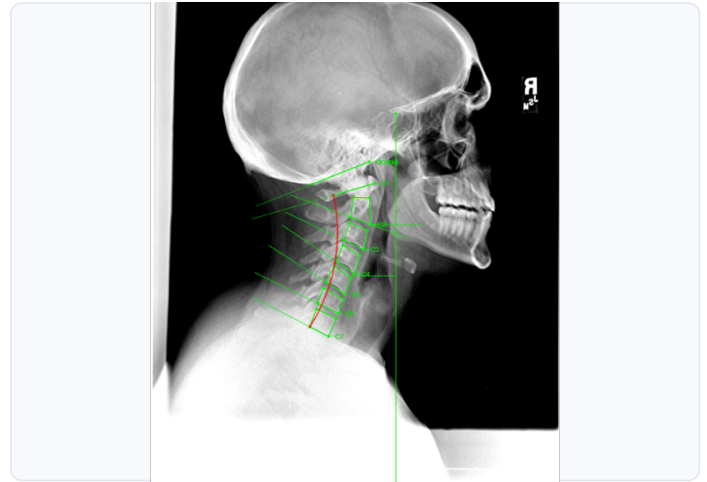
Notes

1. Your actual curve (LL) is 37.32° versus Reference curve for that shape (PLL) 43.80°, which is 6.48° below reference (Your pelvic shape (API) 63.50°).
2. T11 - T12 bends opposite the expected direction at 5.90° against 7.00° reference.
3. T11-T12 is the narrowest disc level at 9.39 mm and 28.2% of the reference proportion.
4. T12 to S1 translation is 63.8 mm versus 0.00mm reference.
5. Whole-curve value 37.32° differs from the summed segment angles 59.50° by 22.18°; no external reference value is used for this internal arithmetic check.

Normal Reference View



Measured Overlay



Green lines are the measurement guides the AI placed. The red line traces the overall curve.

Section Snapshot

Cervical spine (neck): 19 scored measurements (6 within range, 4 mild, 4 moderate, 5 significant).

13 key findings identified from this view.

Chapter summary

Every measurement taken for this region, grouped by deviation from its reference value.

6 Within range	4 Mild	4 Moderate	5 Significant
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Largest deviations from reference

- C2 Slope — -20.28° (reference -10.00°, 10.28° below) — closer to the reference position
- C6 - C7: Flexion 1.19° (reversed) — 1.19° (reference 7.00°, 5.81° below) — bends opposite to the expected curve
- Occiput-C2 — 29.53° (reference 18.00°, 11.53° above) — higher than the reference
- C2 - C3: Flexion 5.38° (reversed) — 5.38° (reference 7.00°, 1.62° below) — bends opposite to the expected curve
- C3 - C4: Flexion 8.24° (reversed) — 8.24° (reference 7.00°, 1.24° above) — bends opposite to the expected curve

Several measurements fall well outside the reference range. Review with your provider is recommended.

Measured, no reference available

CL1 (C2 - C7): 12.36°. Individualized reference unavailable for this view.

Balance and load

Measurement	Value	Reference	Status	Meaning
Forward Head Posture (FHP)	26.13 mm	0mm	Moderate	How far your head sits forward of your shoulders.
C2 Slope	-20.28°	-10°	Significant	The tilt of the top vertebra of your neck.
Occiput-C2	29.53°	18°	Significant	How much of your neck's curve comes from the top two joints.
C1-C2	24.23°	18°	Moderate	How much of your neck's curve comes from the top two joints.

Movement and position, level by level

What it is The angle and shift between one vertebra and the one directly below it, level by level.

Why it matters The overall curve is the sum of these individual levels. This shows where your curve is shared evenly and where it is concentrated.

Level	Bend	Angle	Reference	Shift (signed)	Direction	Cumulative offset	Status
C2 - C3↑	Flexion (reversed)	Flexion 5.38° (reversed)	7°	+0.0 mm	Backward	+0.0 mm	Significant
C3 - C4↑	Flexion (reversed)	Flexion 8.24° (reversed)	7°	+0.3 mm	Backward	+0.3 mm	Significant
C4 - C5	Extension	1.25°	7°	+0.0 mm	Backward	+0.3 mm	Moderate
C5 - C6	Extension	6.48°	7°	-0.2 mm	Forward	+0.1 mm	Within range
C6 - C7↑	Flexion (reversed)	Flexion 1.19° (reversed)	7°	+0.5 mm	Backward	+0.6 mm	Significant

Severity by level



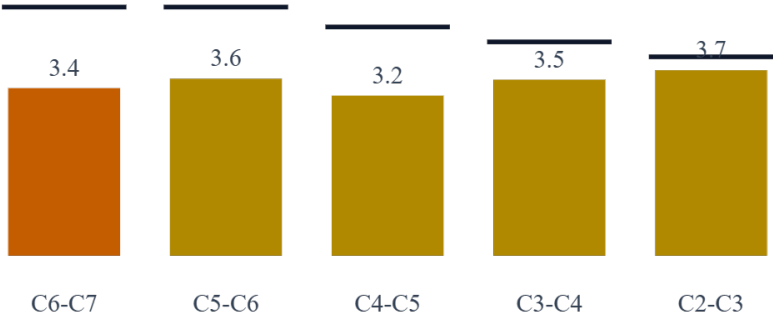
Disc spaces, level by level

What it is Disc height is the cushion height between bones. The ratio compares that height to nearby bone height.

Why it matters Discs act as spacers and shock absorbers. The ratio is usually the most reliable comparison across people and image scaling.

Level	Height	Reference height	Height-to-body ratio	Reference ratio	Status
C6-C7	3.37 mm	5 mm	29.1%	40%	Moderate
C5-C6	3.56 mm	5 mm	37.9%	40%	Mild
C4-C5	3.22 mm	4.6 mm	30.8%	40%	Mild
C3-C4	3.54 mm	4.3 mm	32.5%	40%	Mild
C2-C3	3.73 mm	4 mm	33%	40%	Mild

Disc height (mm)



0 of 5 disc spaces measured at or above the reference proportion; 0 showed thinning; 0 showed collapse. The narrowest was C6-C7 at 29.1%.

Data completeness and provenance

19 measurements were compared with reference values across 5 measured levels (C2 - C3, C3 - C4, C4 - C5, C5 - C6, C6 - C7). 5 disc levels also had reference comparisons.

Measurements in this section are reported in °, mm.

CL1 12.36° across C2–C7 vs summed segment angles -7.08° over the same span (difference +19.44°).

Reference source table

Metric key	Unit	Reference used
C_Disc_Height_C2_C3	mm	4.00
C_Disc_Height_C3_C4	mm	4.30
C_Disc_Height_C4_C5	mm	4.60
C_Disc_Height_C5_C6	mm	5.00
C_Disc_Height_C6_C7	mm	5.00
C_Flexion_Extension	°	7.00
C_Translations	mm	0.00
C1_C2	°	18.00
C2_Slope	°	-10.00
FHP	mm	0.00
Occiput_C2	°	18.00
PTSIA	°	72.00

Provenance

Orientation	RIGHT
Image dimensions	850 x 1000 px
View context	Structured section generated from measured values
Generated at	Withheld

Posterior Curve Angle: 45.00°

† Marked as a significant deviation because this segment bends in the opposite direction to the expected curve, regardless of the size of the angle.

Your baseline for future comparison

This is your first analysis. These measurements will serve as the comparison point for any future X-rays.

Notes

1. C2 - C3 bends opposite the expected direction at 5.38° against 7.00° reference.

2. C6-C7 is the narrowest disc level at 3.37 mm and 29.1% of the reference proportion.

3. Forward head posture is 26.13 mm versus 0.00mm reference.

4. Whole-curve value 12.36° differs from the summed segment angles -7.08° by 19.44°; no external reference value is used for this internal arithmetic check.

5. CL1 (C2 - C7) is 12.36°, and no individualized reference is available because the T1/PTSIA landmarks were not placed.

LL	Lumbar lordosis — the forward curve of your lower back.
API	Anterior pelvic incidence (also called pelvic incidence, PI) — a measure of your pelvic shape.
PI	Pelvic incidence — a measure of your pelvic shape.
PLL	Predicted lumbar lordosis — the reference curve calculated from your pelvic shape.
George's line	A line along the back of the vertebral bodies used to check alignment.
WA	Wedge angle — front-to-back tilt of a single vertebra.
WR	Wedge ratio — front height of a vertebra divided by back height.
DWI	Disc wedge index — front height of a disc space divided by back height.
ACI	Anterior compression index — a measure of front-of-body compression.
GDHI	Global disc height index — total disc height versus total vertebral height.
Meyerding grade	A grade for how far one vertebra has slipped forward over the one below.
flexion	Bending forward (opposite to the usual lordotic curve).
extension	Bending backward (in the direction of the usual lordotic curve).
anterior	Toward the front of the body.
posterior	Toward the back of the body.
cranial	Toward the head.
caudal	Toward the feet.
CL	Cervical lordosis — the forward curve of your neck.
PTSIA	Posterior tangent segmental intersection angle — used to estimate the expected neck curve.
PCL	Predicted cervical lordosis — the reference curve calculated from your PTSIA.
FHP	Forward head posture — how far the head sits forward of the shoulders.
SVA	Sagittal vertical axis — how far the top of the neck sits forward of its base.
CCI	Cervical curvature index — a technical measure of neck curve shape.
CCL	Absolute rotation angle / related cervical curve length metric.
Cobb angle	Angle between two vertebrae used to describe curve size.
Toyama	A method for measuring vertebral shift in the neck.

Limitations

These measurements come from two-dimensional X-ray images. Small differences in how you were positioned for the X-ray can change the numbers. Reference values come from published averages and do not fit every person. This report describes structure only — it is not a diagnosis, and it does not account for symptoms, medical history, or examination findings. Discuss these results with your provider before drawing conclusions.

SAMPLE PROVIDER

Sample Provider

DIPLOMATE:—

DETAILS: WITHHELD

● SAMPLE ONLY

REF: SAMPLE

DATE: Withheld

De-identified sample. Signature removed.