

Skulls & vertebrae + questions about you today!



BI 199 APWT Discussion 15

- I. Announcements*** Poster presentation scoring. Q?
- II. American College of **Sports** Medicine (ACSM)
American Heart Association (AHA), US
Government/Centers for Disease Control (CDC)
Guidelines: How Much Exercise is Enough?***
 - A. Endurance training**
 - B. Strength training**
- III. Anatomy Lab Skulls & Vertebrae Group Work***
- IV. Questions about You!***

PRESENTER #1 The Phantom Lifter!

1. Was the focus or topic of the presentation clear?

Not Too Clear		Moderately Clear		Extremely Clear
1	2	3	4	5

2. To what extent was structure/function/weight training covered in the presentation?

Not Much Anat/Phys		Moderate Amount		Extensive Amount
1	2	3	4	5

3. Do you feel that the presenter's poster was well-designed? That is, was the presentation method appropriate & well-displayed?

Another Medium Better		Reasonable Choice		Best Choice Possible
1	2	3	4	5

4. Did the presenter answer questions clearly and directly during the question/answer/discussion period?

Not Too Well		Moderately Well		Extremely Well
1	2	3	4	5

5. How do you personally evaluate the presenter's overall participation in their project?

Limited Participation		Moderate Participation		Extensive Participation
1	2	3	4	5

Please feel free to make additional comments below.

The phantom did a beautiful job! I really liked his color choices and the layout of his poster. He also knocked us out in the Q & A session! Fabulous effort!!

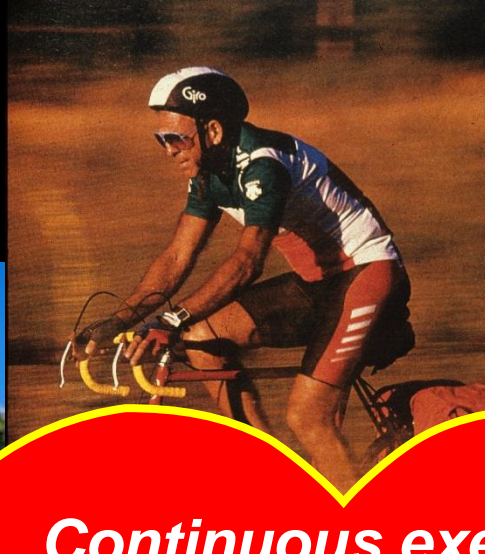
$\Sigma = 25$

Legible?
Who is
this guy?

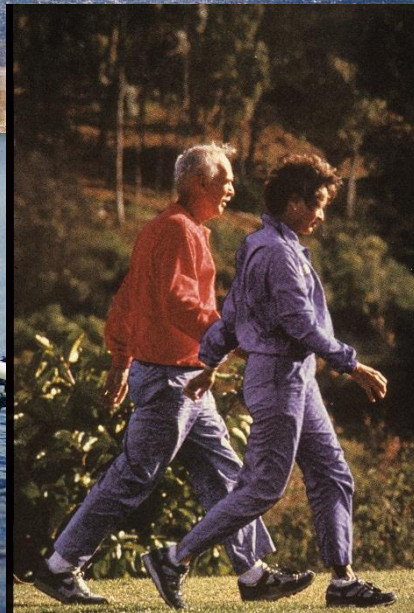
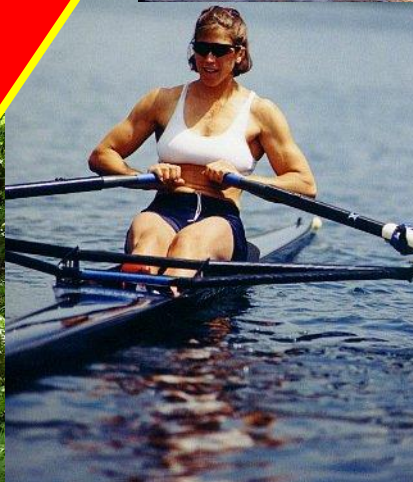
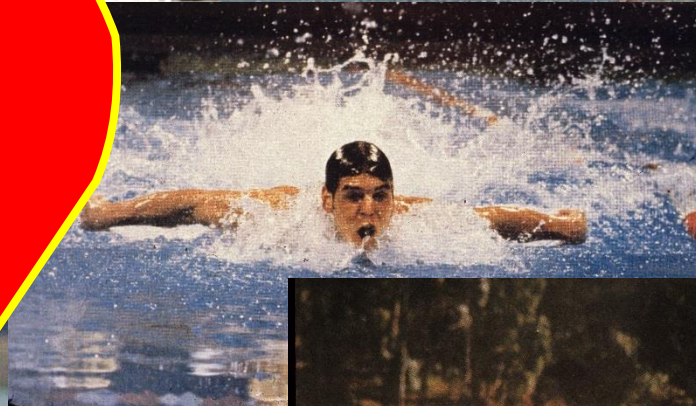


EVALUATOR'S NAME _____

How much aerobic?



Continuous exercise
≥ 50% muscle mass
Moderate?
≥ 30 min/d, ≥ 5 d/wk
Vigorous?
≥ 20 min/d,
≥ 3 d/wk





AMERICAN COLLEGE
of **SPORTS MEDICINE**

Guidelines: Healthy Adults < 65 yr



**Do moderately intense aerobic exercise
≥ 30 min/d, 5 d/wk**

OR

**Do vigorously intense aerobic exercise
≥ 20 min/d, 3 d/wk**

AND

**Do 8-10 strength-training exercises
8-12 repetitions/each exercise, 2 d/wk**

How much strength?

- 2-3 days/wk
- 8-10 exercises for major muscle groups
- ≥ 1 set/exercise
- 8-12 (most) or 10-15 (frail/ $>$ 50-60 yr) repetitions/set

<http://www.acsm.org/access-public-information/position-stands>



Federal exercise guidelines include strength training for all!

<http://www.health.gov/paguidelines/guidelines/default.aspx>

<http://www.healthfinder.gov/prevention/ViewTopic.aspx?topicID=22>

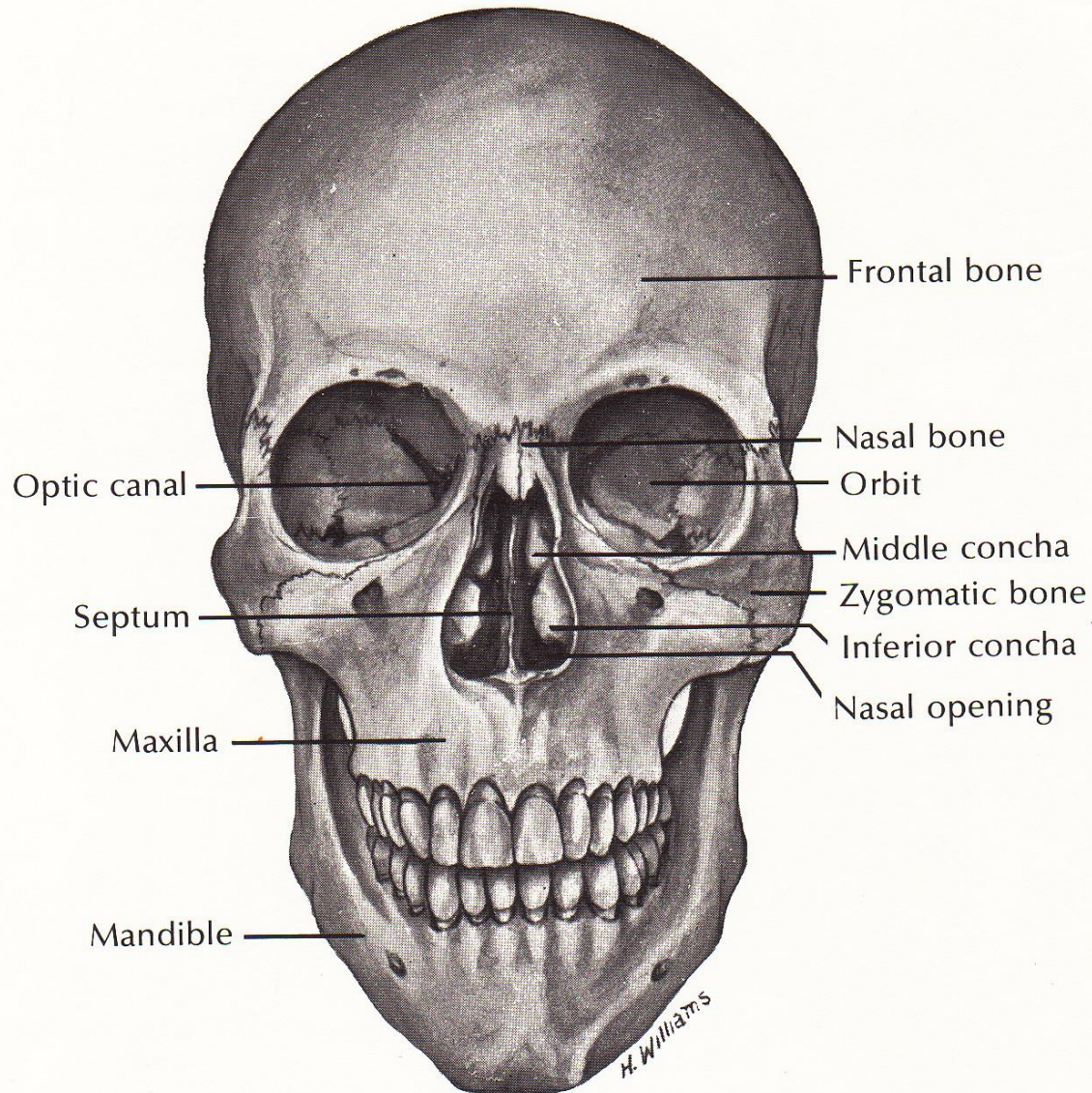
http://www.usatoday.com/news/health/weightloss/2008-10-07-physical-activity_N.htm



Adults: Moderate to Vigorous Exercise \geq 30 min, 5 d/wk

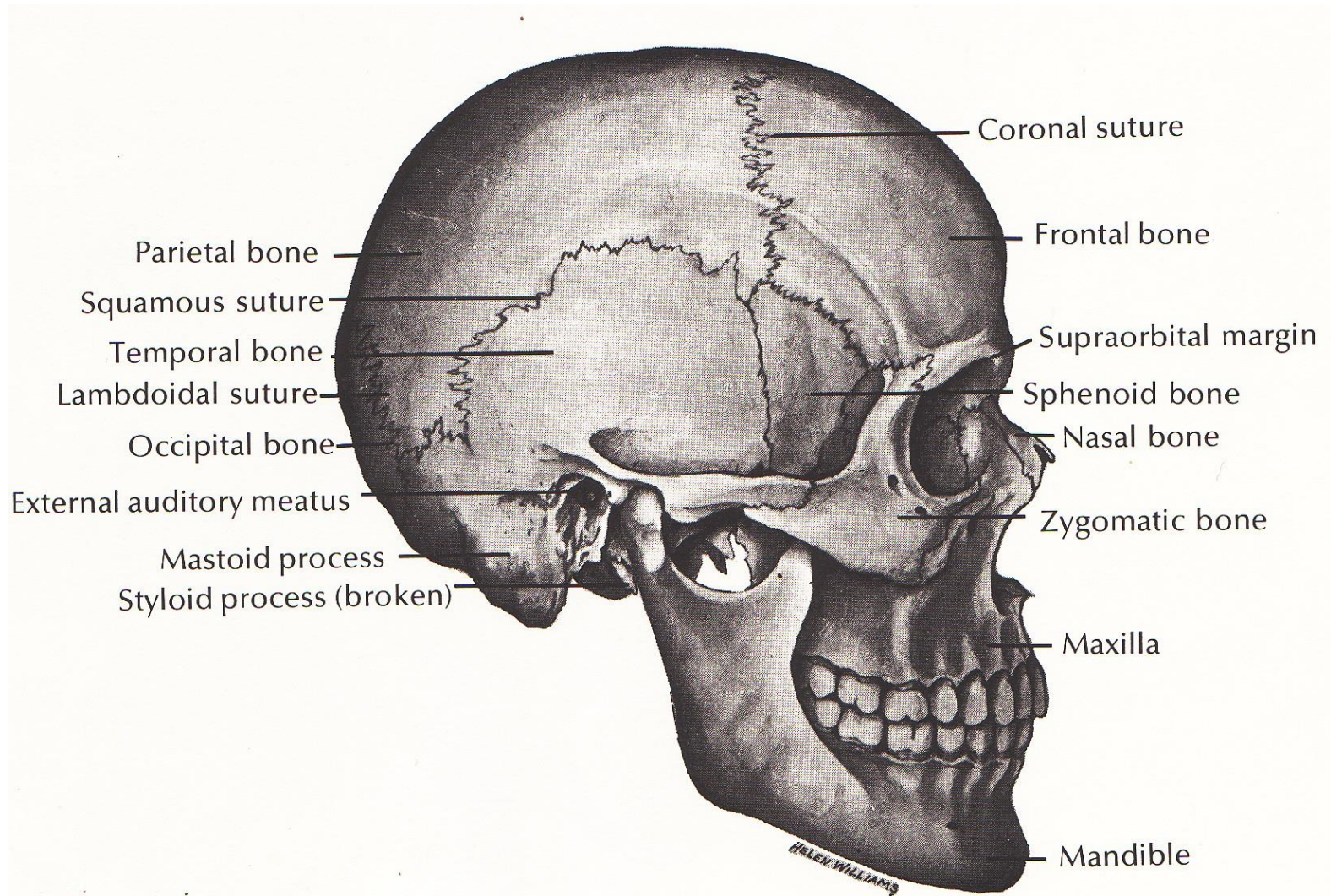
Children: Moderate to Vigorous Exercise \geq 60 min, 5 d/wk

Skull – Anterior view, 25 yr old male



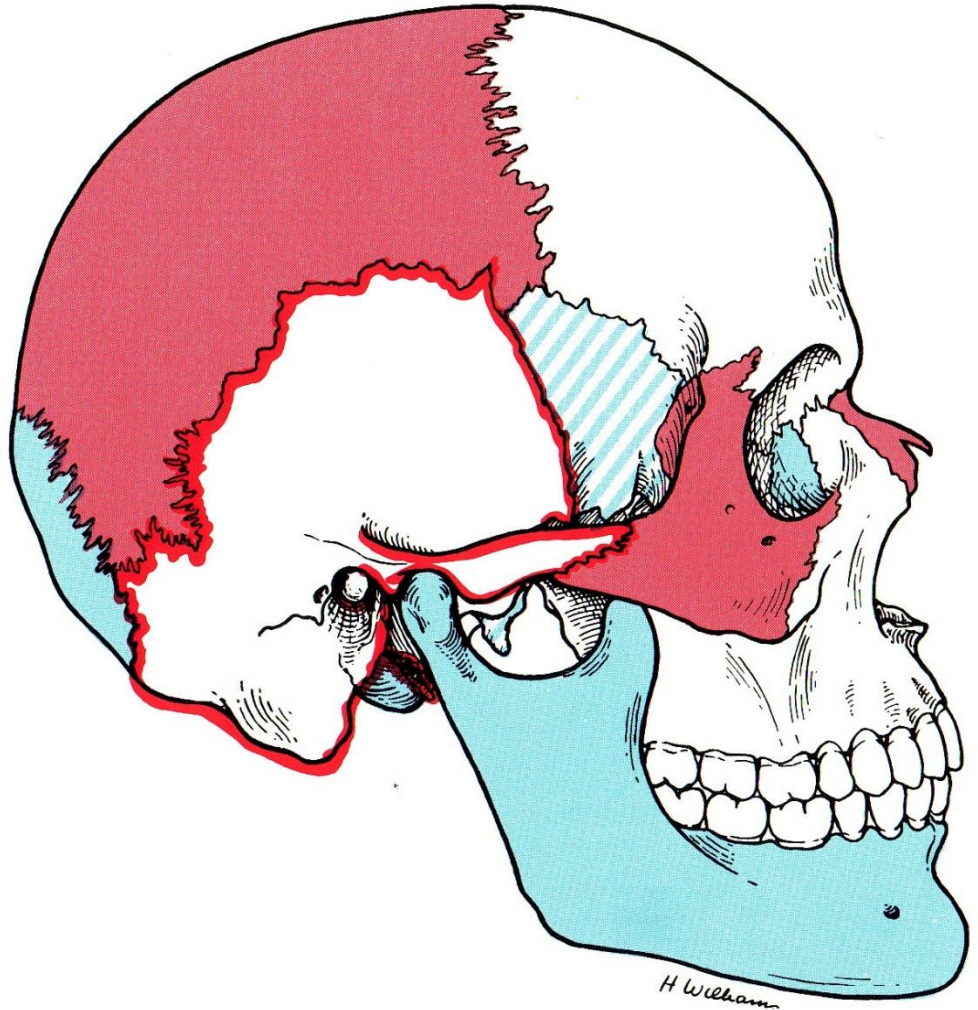
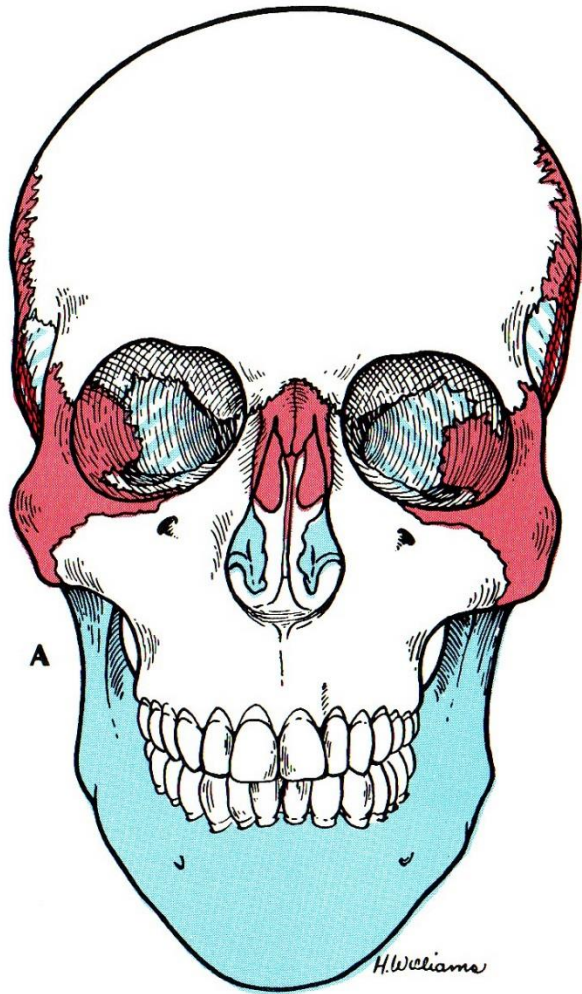
Source: Francis & Martin, 1975. Illustration by Helen Williams.

Skull – Lateral view, 25 yr old male



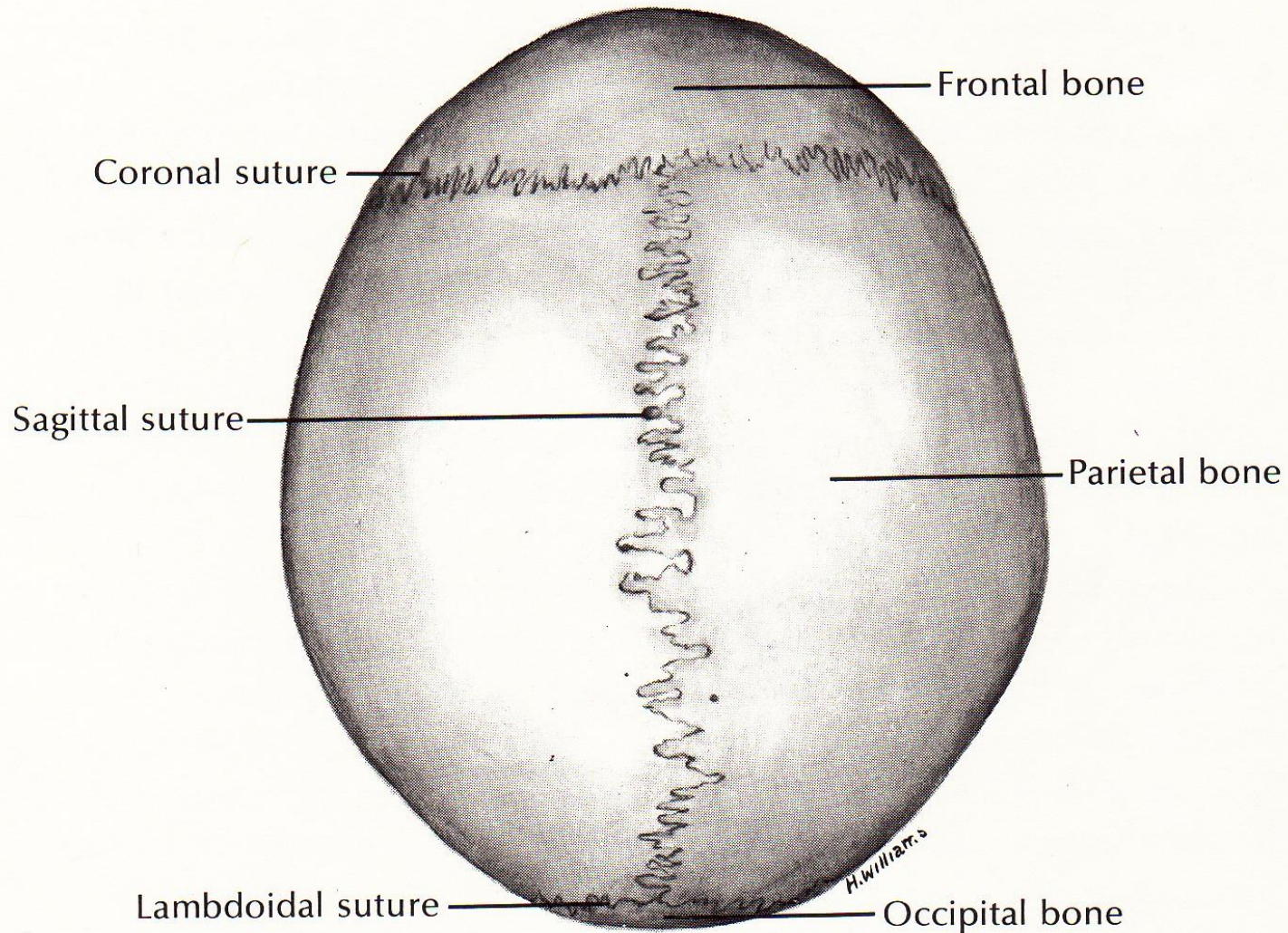
Source: Francis & Martin, 1975. Illustration by Helen Williams.

Name the **colored** bones!



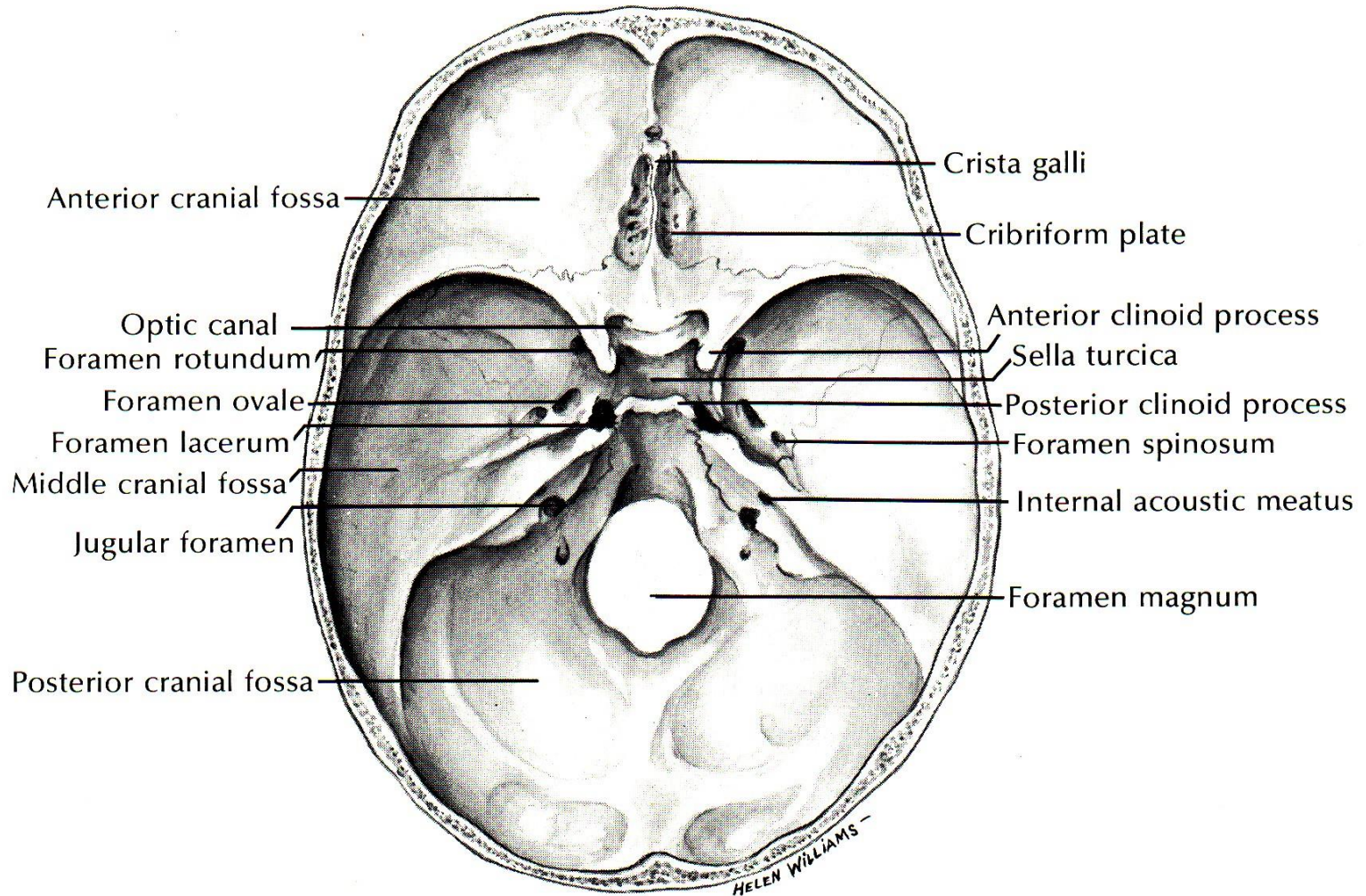
Source: Francis & Martin, 1975. Illustration by Helen Williams.

Identify these sutures! Why present?



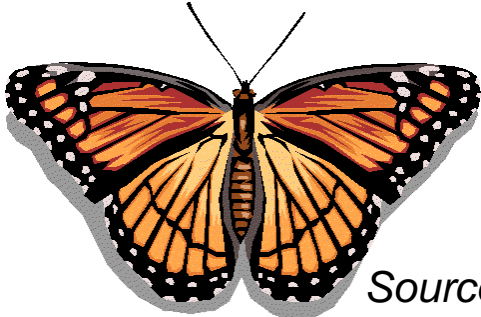
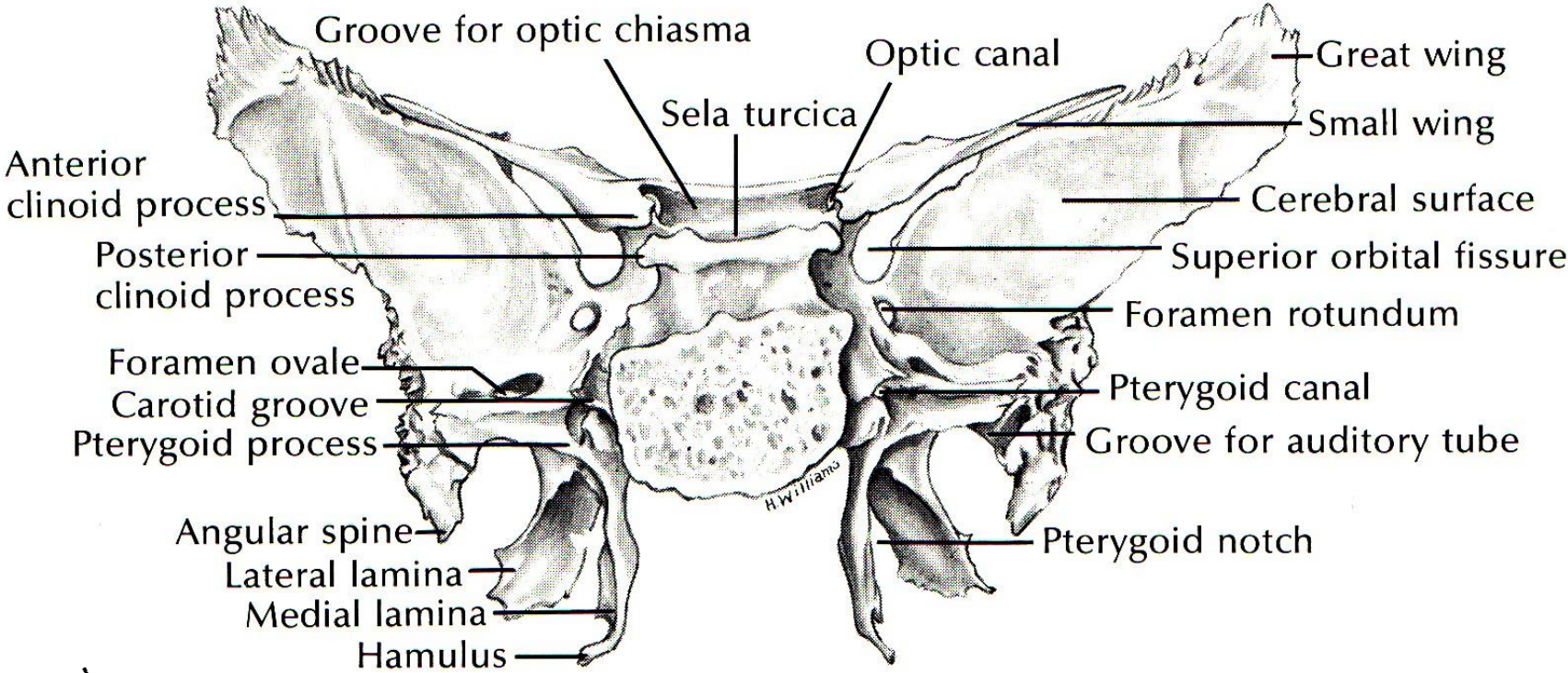
Source: Francis & Martin, 1975. Illustration by Helen Williams.

Cranial cavity floor, 25 yr old male



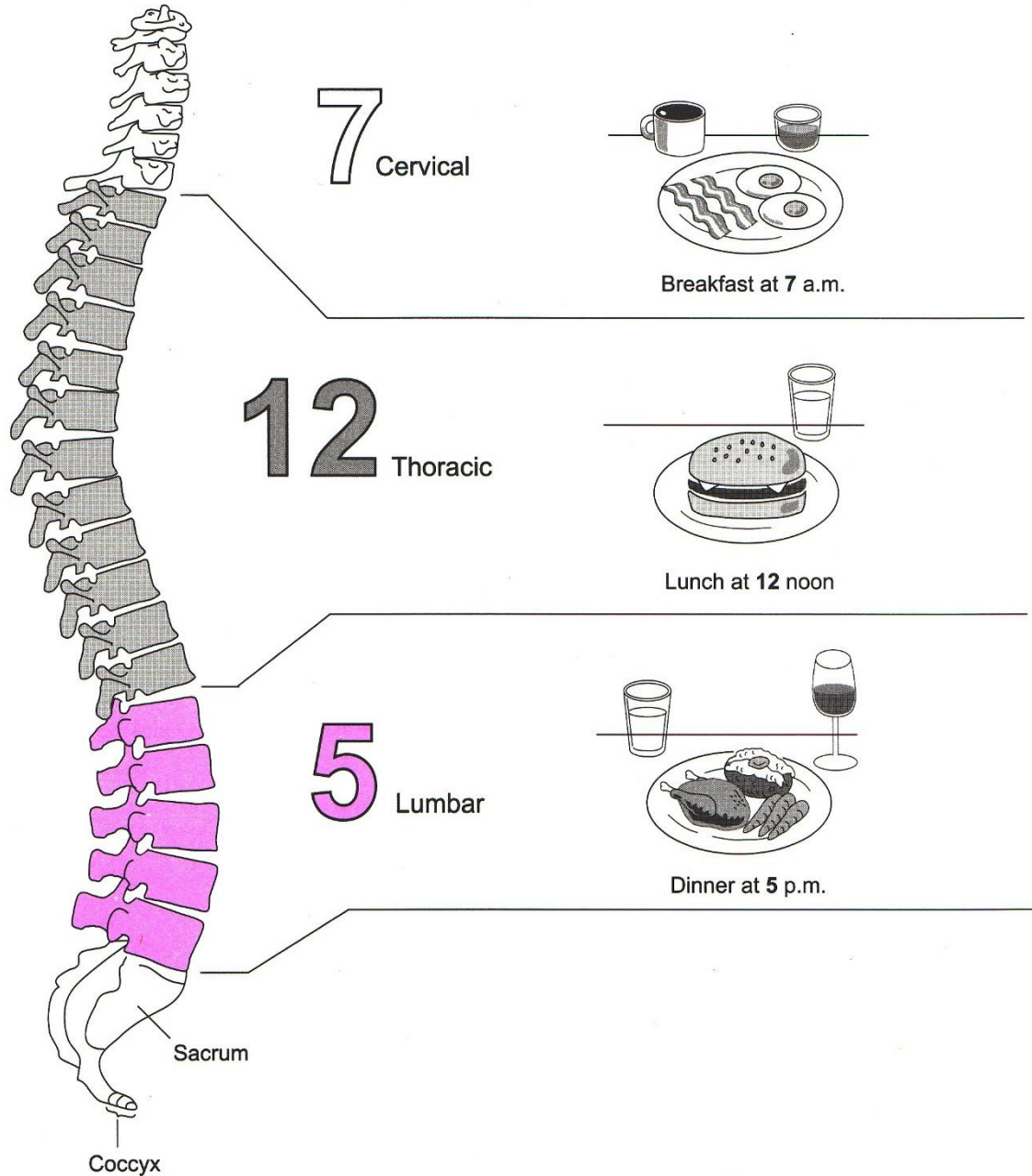
Source: Francis & Martin, 1975. Illustration by Helen Williams.

Sphenoid – Butterfly! Pat's favorite!

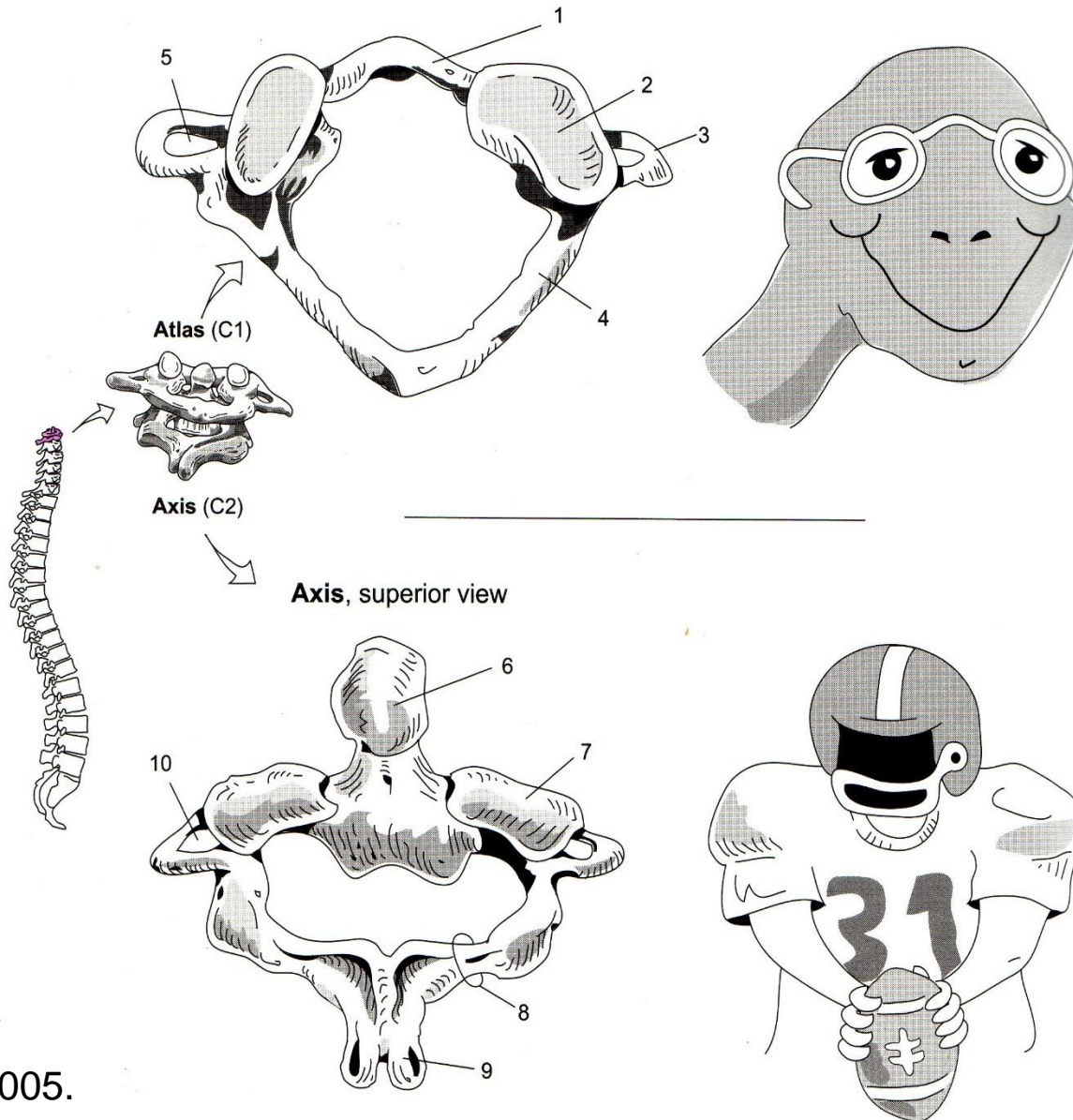


Source: Francis & Martin, 1975. Illustration by Helen Williams.

Vertebral column numbers!

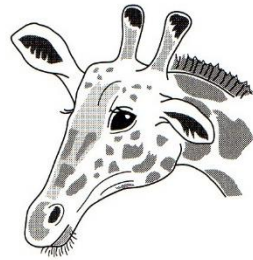
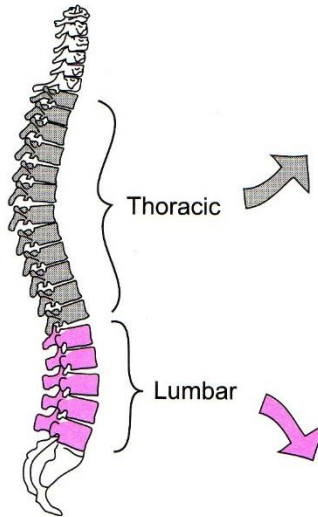


Atlas (C-1) & Axis (C-2) support & rotate the world!



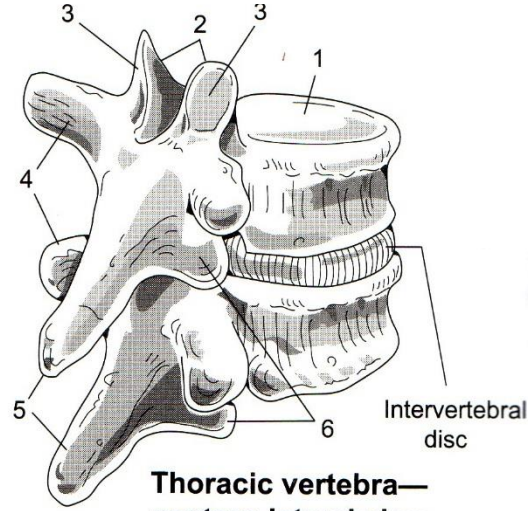
Thoracic giraffe & lumbering moose!

LOCATION



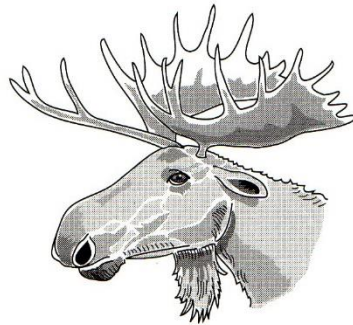
"Thoracic giraffe"

In this postero-lateral view, the posterior portion of a lumbar vertebra looks like the head of a giraffe.



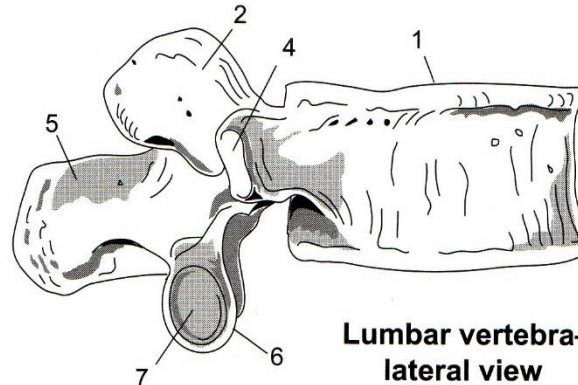
**Thoracic vertebra—
postero-lateral view**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____



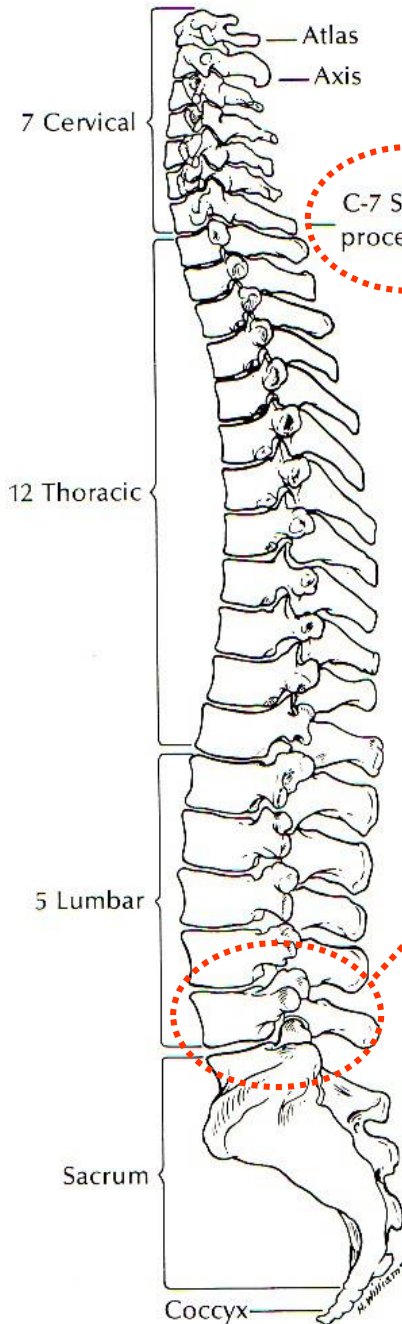
"Lumbering moose"

In the lateral view, the posterior portion of a lumbar vertebra looks like the head of a moose.



**Lumbar vertebra—
lateral view**

Vertebral column – Lateral view

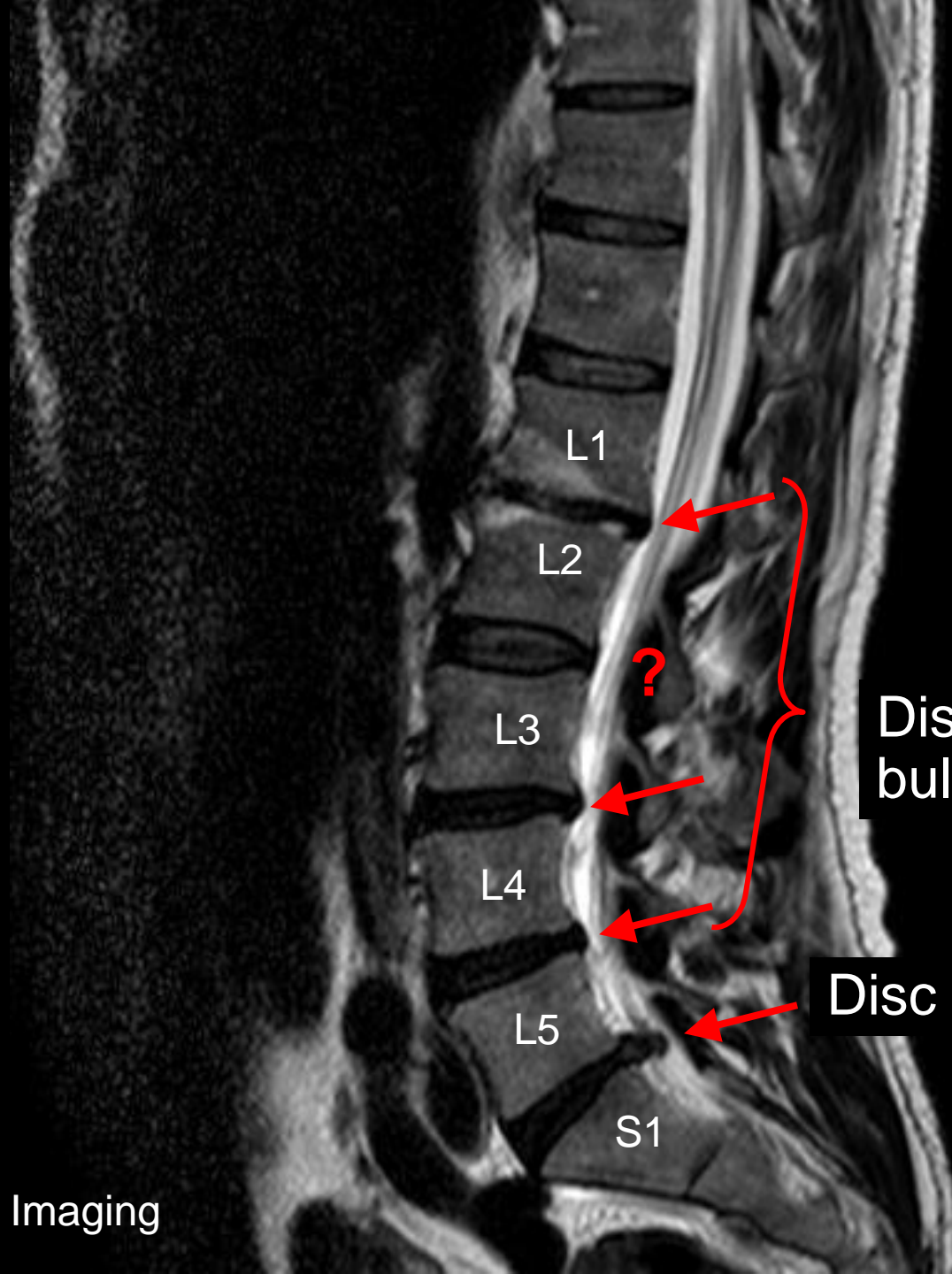


Feel this bump on the back of your neck!

Where many have problems with disc herniations!

Source: Francis & Martin, 1975.

MRI 061307
Lumbar spine
Lateral view



L1

L2

L3

L4

L5

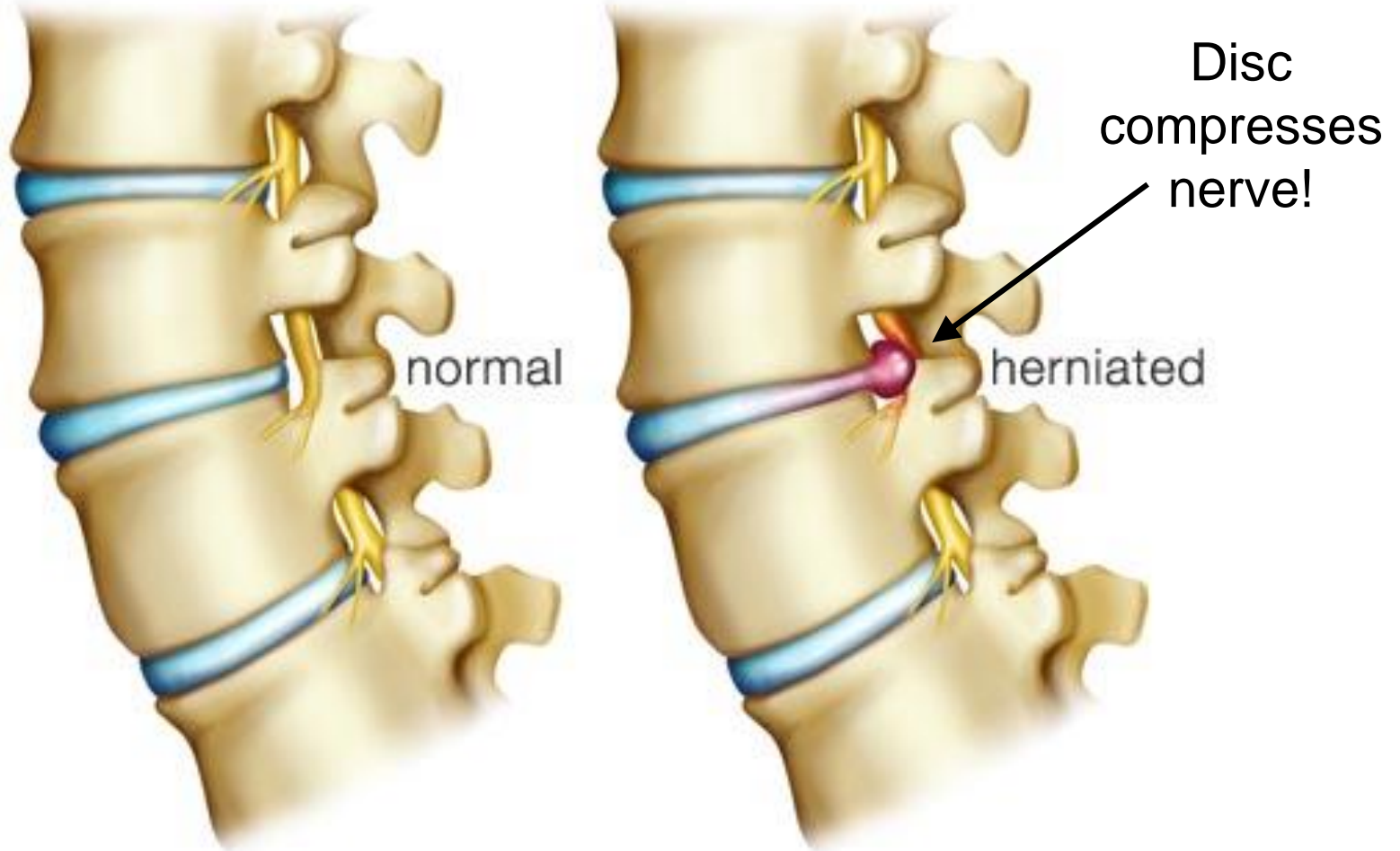
S1

?

Discs
bulging

Disc herniation

Problems with herniated disc!



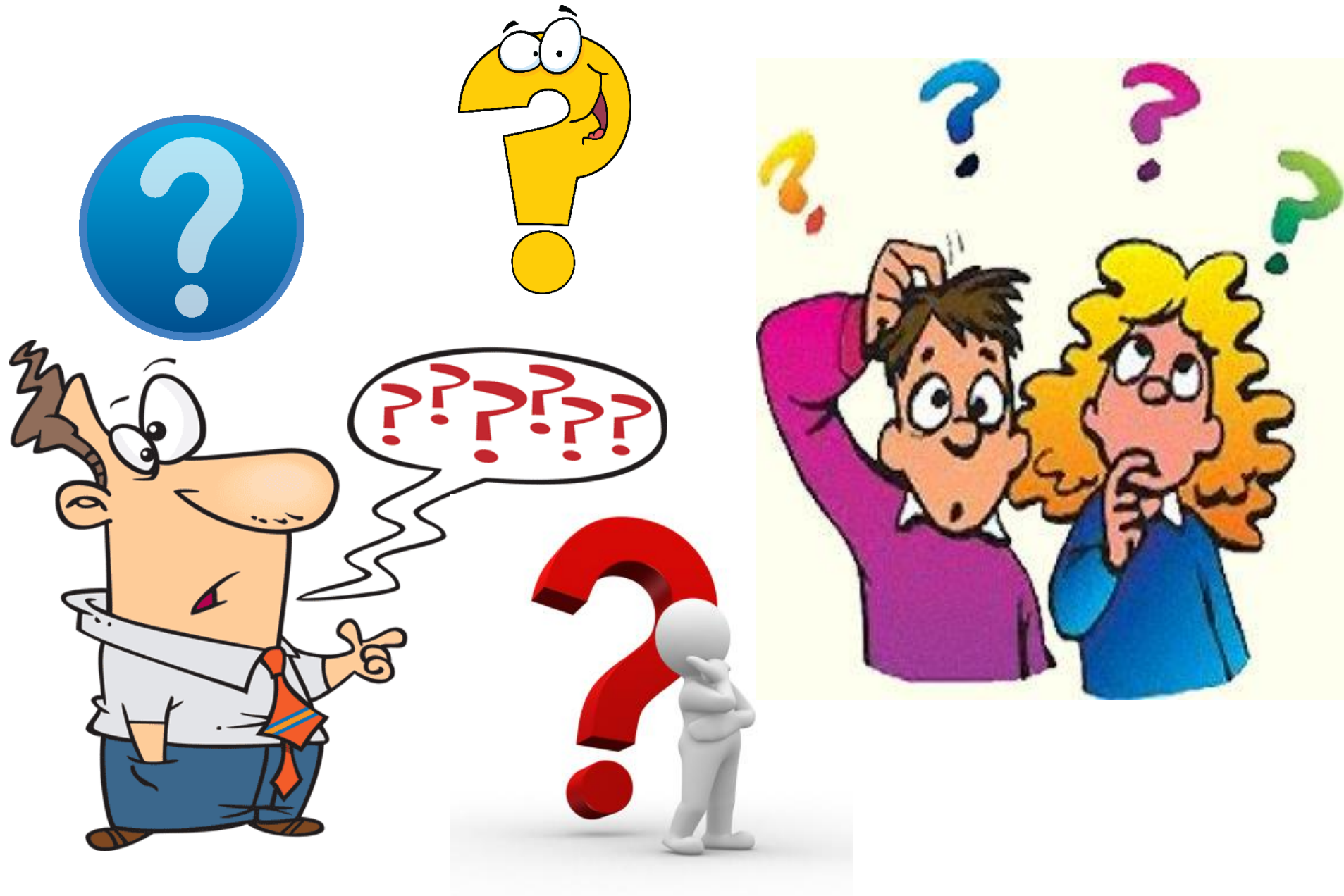


MRI 061307
Lumbar spine
Axial view

Oregon Imaging

9.4 x 8.1 mm
Protrusion

Comments + Questions about you!!





"I don't have any answers. I'm a non-prophet."