

# OIANs of all the muscles

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## 1 Muscles of the back

### 1.1 Suboccipitals

- [Rectus capitis posterior major](#)
- [Rectus Capitis Posterior Minor](#)
- [Obliquus capitis superior](#)
- [Obliquus capitis inferior](#)

Table 1: Suboccipital muscle group

Muscle	Origin	Insertion	Nerve	Action
<a href="#">Rectus Capitis Posterior Major</a>	C2 (SP)	Occipital bone (inferior nuchal line, middle third)	<a href="#">Suboccipital N.</a>	<b>BIL:</b> Extend head; <b>UNIL:</b> I/L head rotation

Muscle	Origin	Insertion	Nerve	Action
Rectus Capitis Posterior Minor	C1 (posterior tubercle)	Occipital bone (inferior nuchal line, inner 1/3)	Suboccipital N.	<b>BIL:</b> Extend head; <b>UNIL:</b> I/L head rotation
Obliquus Capitis Superior	C1 (TP)	Occipital bone (inferior nuchal line, middle third)	Suboccipital N.	<b>BIL:</b> Extend head; <b>UNIL:</b> I/L SB, C/L rotation
Obliquus Capitis Inferior	C2 (SP)	C1 TP	Suboccipital N.	<b>BIL:</b> Extend head; <b>UNIL:</b> I/L rotation

## 1.2 Prevertebral Muscles

- Longus capitis
- Longus Colli Cervicis
- Rectus Capitis anterior
- Rectus Capitis Lateralis

Table 2: Prevertebral muscle group

Muscle	Origin	Insertion	Nerve	Action
Longus Capitis	C3-C6 (TP, ant tubercles)	Occipital bone (basilar part)	Direct branches from cervical plexus (C1-C3)	<b>BIL</b> flexes head; <b>UNIL</b> flexes and slight I/L rotation
Longus colli cervicis	<b>Vertical part:</b> C5-T3 (ant side of vertebral body); <b>Sup-oblique</b> C3-C5 (TP, Ant tubercle) <b>Inf-Oblique:</b> T1-T3 (ant side of vertebral body)	<b>Vertical part:</b> C2-C4 (ant sides of vertebral bodies); <b>Sup-oblique</b> C1 (TP, ant tubercle) <b>Inf-Oblique:</b> C5-C6 (TP, Ant tubercles)	Direct branches from cervical plexus (C2-C6)	<b>BIL:</b> Flex AO Joint; <b>UNIL:</b> Lat flex at AO joint

Muscle	Origin	Insertion	Nerve	Action
<a href="#">Rectus Capitis Anterior</a>	C1 (lateral mass)	Occipital bone (basilar part)	C1 Ant ramus	<b>BIL:</b> flex AO Joint; <b>UNIL:</b> Lateral Flexion of AO joint
<a href="#">Rectus Capitis Lateralis</a>	C1 (TP)	Occipital bone (basilar part, lateral to occipital condyles)	C1 Anterior Ramus	<b>BIL:</b> flex AO Joint; <b>UNIL:</b> Lateral Flexion of AO joint

### 1.3 Superficial intrinsic back Muscles

- [Serratus posterior superior](#)
- [Serratus posterior inferior](#)
- [Splenius capitis](#)
- [Splenius cervicis](#)

Table 3: Superficial intrinsic back Muscles OIANs

Muscle	Origin	Insertion	Nerve	Action
<a href="#">Serratus Posterior Superior</a>	<a href="#">Nuchal ligament</a> , C7-T3 SP	2-4th ribs (sup border)	<a href="#">Spinal nn.</a> T2-T5 (Ant ramus)	Elevates ribs
<a href="#">Serratus Posterior Inferior</a>	T11-L2 (SP)	8-12th ribs (inferior borders near angles)	<a href="#">Spinal nn.</a> T9-T12 (Anterior rami)	Depresses ribs
<a href="#">Splenius Capitis</a>	<a href="#">Nuchal ligament</a> , - C7-T3/T4 SP	Lateral 1/3 nuchal line (occipital bone), Mastoid process (temporal bone)	<a href="#">spinal nn.</a> C1-C6 (Post rami, lateral branches)	<b>BIL:</b> Extends C/S and head; <b>UNIL:</b> I/L head SB and Rotation
<a href="#">Splenius Cervicis</a>	T3-T6/T7 (SP)	C1-C3/4 (TP)	<a href="#">Spinal nn.</a> C1-C6 (Post rami, lateral branches)	<b>BIL:</b> Extends C/S and head; <b>UNIL:</b> I/L head SB and Rotation

## 1.4 Intermediate intrinsic back muscles (Erector Spinae)

- Iliocostalis
  - Iliocostalis Cervicis
  - Iliocostalis Thoracis
  - Iliocostalis lumborum
- Longissimus
  - Longissimus Capitis
  - Longissimus Cervicis
  - Longissimus Thoracis
- Spinalis
  - Spinalis Cervicis
  - Spinalis Thoracis

Table 4: Erector Spinae OIAN

Muscle	Origin	Insertion	Nerve	Action
Iliocostalis cervicis	3rd-7th ribs	C4-C6 TP	Spinal nn. C8-L1 (Post rami, lateral branches)	<b>BIL:</b> Extends spine; <b>UNIL:</b> I/L spine lat-flexion
Iliocostalis thoracis	7-12th ribs	1st-6th ribs	Spinal nn. C8-L1 (Post rami, lateral branches)	<b>BIL:</b> Extends spine; <b>UNIL:</b> I/L spine lat-flexion
Iliocostalis lumborum	Sacrum, iliac crest, lumbar vertebrae SP; lower thoracic vertebrae TP	6-12th ribs, thoracolumbar fascia (posterior layer), upper lumbar vertebrae (TP)	Spinal nn. C8-L1 (Post rami, lateral branches)	<b>BIL:</b> Extends spine; <b>UNIL:</b> I/L spine lat-flexion
Longissimus Capitis	T1-T3 (TP), C4-C7 (TP & articular process)	Temporal bone (Mastoid process)	Spinal nn. C1-L5 (Post rami, lateral branches)	<b>BIL:</b> Extends head; <b>UNIL:</b> Flexes and I/L rotation
Longissimus Cervicis	T1-T6 (TP)	C2-C5 (TP)	Spinal nn. C1-L5 (Post rami, lateral branches)	<b>BIL:</b> Extends spine; <b>UNIL:</b> I/L SB

Muscle	Origin	Insertion	Nerve	Action
<a href="#">Longissimus Thoracis</a>	Sacrum; Iliac crest; Lumbar vertebrae (SP); Lower thoracic vertebrae (TP)	2nd-12th ribs; Thoracic & Lumbar vertebrae (TP)	<a href="#">Spinal nn.</a> C1-L5 (Post rami, lateral branches)	<b>BIL:</b> Extends spine; <b>UNIL:</b> I/L SB
<a href="#">Spinalis Cervicis</a>	C5-T2 (SP)	C2-C5 (SP)	<a href="#">Spinal nn. (Posterior Rami)</a>	<b>BIL:</b> Extends C/S and T/S; <b>UNIL:</b> I/L SB cervical and thoracic spine
<a href="#">Spinalis Thoracis</a>	T10-L3 (SP, lat surface)	T2-T8 (SP, lat surface)	<a href="#">Spinal nn. (Posterior Rami)</a>	<b>BIL:</b> Extends C/S and T/S; <b>UNIL:</b> I/L SB cervical and thoracic spine

## 1.5 Transversospinalis Muscles

Table 5: Transversospinalis Muscles OIAN

Muscle	Origin	Insertion	Nerve	Action
<a href="#">Rotatores Breves</a>	T1-T12 TP of lower vertebrae	T1-T12: SP of adjacent vertebrae	<a href="#">Spinal nn. (Posterior Rami)</a>	<b>BIL:</b> Extends T/S; <b>UNIL:</b> C/L Rotation of T/S
<a href="#">Rotatores Longi</a>	T1-T12 TP of lower vertebrae	T1-T12: SP of vertebrae 2 above (it skips a vertebrae)	<a href="#">Spinal nn. (Posterior Rami)</a>	<b>BIL:</b> Extends T/S; <b>UNIL:</b> C/L Rotation of T/S
<a href="#">Multifidi</a>	Sacrum, ilium, mamillary process of L1-L5, T1-T4 (TP and Articular process), C4-C7	Superomedially to SP (skipping 2-4 vertebrae)	<a href="#">Spinal nn. (Posterior Rami)</a>	<b>BIL:</b> Extends extends spine; <b>UNIL:</b> I/L SB and C/L Rotation

Muscle	Origin	Insertion	Nerve	Action
Semispinalis Capitis	C4-T7 (TP and Articular process)	Occipital bone (between superior and inferior nuchal lines)	Spinal nn. (Posterior Rami)	<b>BIL:</b> Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); <b>UNIL:</b> I/L SB of head, cervical, and thoracic spine; C/L Rotation
Semispinalis Cervicis	T1-T6 (TP)	C2-C5 (SP)	Spinal nn. (Posterior Rami)	<b>BIL:</b> Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); <b>UNIL:</b> I/L SB of head, cervical, and thoracic spine; C/L Rotation
Semispinalis Thoracis	T6-T12 (TP)	C6-T4 (SP)	Spinal nn. (Posterior Rami)	<b>BIL:</b> Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); <b>UNIL:</b> I/L SB of head, cervical, and thoracic spine; C/L Rotation

## 1.6 Deep Segmental Back Muscles

Table 6: Deep Segmental Back Muscles OIAN

Muscle	Origin	Insertion	Nerve	Action
<a href="#">Interspinales Cervicis</a>	C1-C7: SP of inferiorly adjacent vertebrae	C1-C7: SP of superiorly adjacent vertebrae	<a href="#">Spinal nn. (Posterior Rami)</a>	Extends cervical and Lumbar spines
<a href="#">Interspinales Lumbora</a>	L1-L5: SP of inferiorly adjacent vertebrae	L1-L5: SP of superiorly adjacent vertebrae	<a href="#">Spinal nn. (Posterior Rami)</a>	<b>BIL:</b> Stabilizes and extends cervical and lumbar vertebrae; <b>UNIL:</b> I/L SB cervical and lumbar spines