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1 Suboccipitals

Table 1: Suboccipital muscle group

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

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)	BIL flexes head; UNIL flexes and slight I/L rotation
Longus colli cervicis	Vertical part: C5-T3 (ant side of vertebral body); Sup-oblique C3-C5 (TP, Ant tubercle) Inf-Oblique: T1-T3 (ant side of vertebral body)	Vertical part: C2-C4 (ant sides of vertebral bodies); Sup-oblique C1 (TP, ant tubercle) Inf-Oblique: C5-C6 (TP, Ant tubercles)	Direct branches from cervical plexus (C2-C6)	BIL: Flex AO Joint; UNIL: Lat flex at AO joint
Rectus Capitis Anterior	C1 (lateral mass)	Occipital bone (basilar part)	C1 Ant ramus	BIL: flex AO Joint; UNIL: Lateral Flexion of AO joint
Rectus Capitis Lateralis	C1 (TP)	Occipital bone (basilar part, lateral to occipital condyles)	C1 Anterior Ramus	BIL: flex AO Joint; UNIL: Lateral Flexion of AO joint

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

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)	BIL: Extends spine; UNIL: I/L spine lat-flexion
Iliocostalis thoracis	7-12th ribs	1st-6th ribs	Spinal nn. C8-L1 (Post rami, lateral branches)	BIL: Extends spine; UNIL: 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)	BIL: Extends spine; UNIL: 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)	BIL: Extends head; UNIL: Flexes and I/L rotation
Longissimus Cervicis	T1-T6 (TP)	C2-C5 (TP)	Spinal nn. C1-L5 (Post rami, lateral branches)	BIL: Extends spine; UNIL: I/L SB
Longissimus Thoracis	Sacrum; Iliac crest; Lumbar vertebrae (SP); Lower thoracic vertebrae (TP)	2nd-12th ribs; Thoracic & Lumbar vertebrae (TP)	Spinal nn. C1-L5 (Post rami, lateral branches)	BIL: Extends spine; UNIL: I/L SB
Spinalis Cervicis	C5-T2 (SP)	C2-C5 (SP)	Spinal nn. (Posterior Rami)	BIL: Extends C/S and T/S; UNIL: I/L SB cervical and thoracic spine
Spinalis Thoracis	T10-L3 (SP, lat surface)	T2-T8 (SP, lat surface)	Spinal nn. (Posterior Rami)	BIL: Extends C/S and T/S; UNIL: I/L SB cervical and thoracic spine

5 Transversospinalis Muscles

Table 5: Transversospinalis Muscles OIAN

Muscle	Origin	Insertion	Nerve	Action
Rotatores Breves	T1-T12 TP of lower vertebrae	T1-T12: SP of adjacent vertebrae	Spinal nn. (Posterior Rami)	BIL: Extends T/S; UNIL: C/L Rotation of T/S
Rotatores Longi	T1-T12 TP of lower vertebrae	T1-T12: SP of vertebrae 2 above (it skips a vertebrae)	Spinal nn. (Posterior Rami)	BIL: Extends T/S; UNIL: C/L Rotation of T/S
Multifidi	Sacrum, ilium, mamillary process of L1-L5, T1-T4 (TP and Articular process), C4-C7	Superomedially to SP (skipping 2-4 vertebrae)	Spinal nn. (Posterior Rami)	BIL: Extends extends spine; UNIL: I/L SB and C/L Rotation
Semispinalis Capitis	C4-T7 (TP and Articular process)	Occipital bone (between superior and inferior nuchal lines)	Spinal nn. (Posterior Rami)	BIL: Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); UNIL: I/L SB of head, cervical, and thoracic spine; C/L Rotation
Semispinalis Cervicis	T1-T6 (TP)	C2-C5 (SP)	Spinal nn. (Posterior Rami)	BIL: Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); UNIL: I/L SB of head, cervical, and thoracic spine; C/L Rotation

Muscle	Origin	Insertion	Nerve	Action
Semispinalis Thoracis	T6-T12 (TP)	C6-T4 (SP)	Spinal nn. (Posterior Rami)	BIL: Extends thoracic and cervical spines and head (stabilizes craniovertebral jt); UNIL: I/L SB of head, cervical, and thoracic spine; C/L Rotation

6 Deep Segmental Back Muscles

Table 6: Deep Segmental Back Muscles OIAN

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