

first edition, first print



ANATOMY BY PLANES

A Soft Tissue Therapy Anatomy Atlas

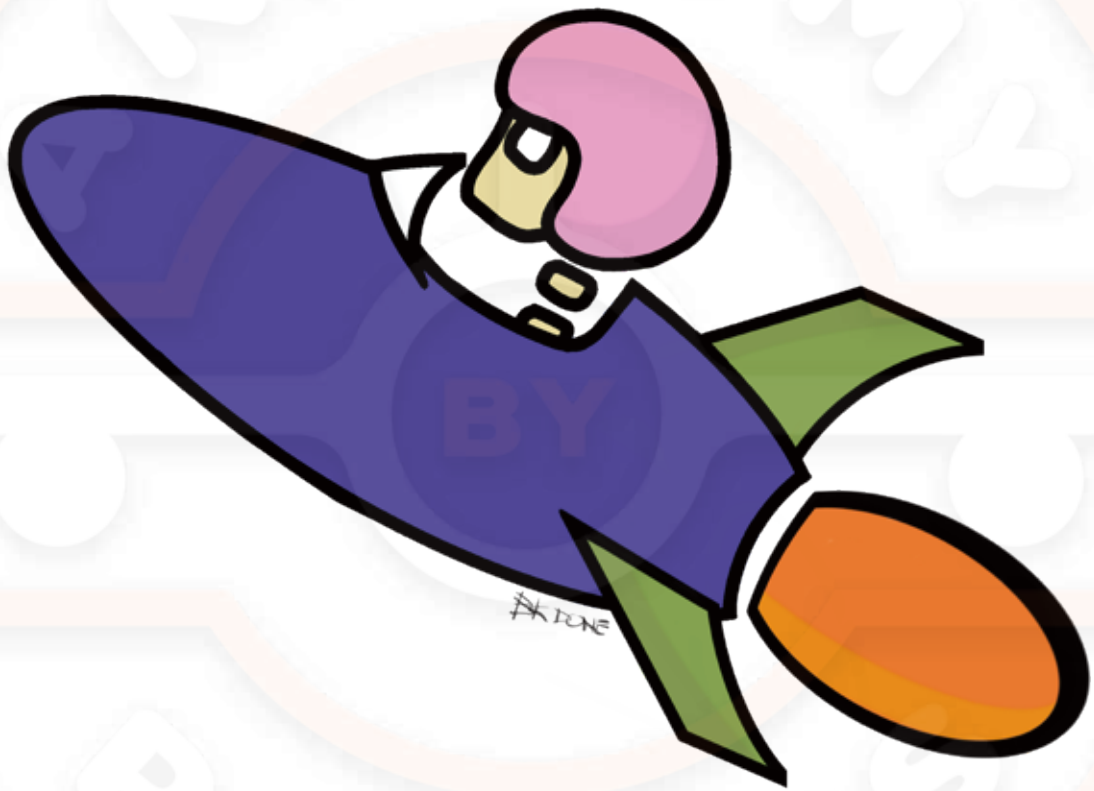


SAMPLE
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Atlas 1, the Sagittal Plane

flexion and extension

Willem Kramer



Anatomy by Planes



SAMPLE

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Website
<https://www.anatomybyplanes.com>

scan me

Dedication

Voor moeder en vader. Thank you for being my mom and dad.



SAGITTAL
FRONTAL
TRANSVERSE

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1

SAGITTAL SHOULDER GIRDLE

Motion	253
Dermatomes and muscle overview	254
Joints	255
Single-complex anterior tilters	257
Single-complex posterior tilter	259
Multi-complex anterior tilter	261
Multi-complex posterior tilters	263

WHAT TO TREAT AND EXERCISE

WHEN SHOULDER GIRDLE ANTERIOR TILT-POSTERIOR TILT HURT

ATLAS 1

S12



S13

S14



Motion

Sagittal shoulder girdle

Please note that the scapula is not positioned vertically, instead it has a "natural" 10 degrees anterior tilt.

"Normal" total ROM

Anterior tilt: 10 - 15 degrees

Posterior tilt: 20 - 25 degrees

aka anterior rotation

left shoulder girdle

Anterior Tilt

ANTERIOR TILT

top of the scapula tilts forward - inferior scapular angle comes off ribs



* left-2-right axis

aka posterior rotation

left shoulder girdle

Posterior Tilt

POSTERIOR TILT

top of the scapula tilts backward - inferior angle "sits" on ribs



lateral view, **LEFT** shoulder girdle

medial view, **LEFT** shoulder girdle

Dermatomes and Muscle Overview

Sagittal shoulder girdle

dermatomes

C3

T9



SKIN

← The whole shoulder girdle moves, but anterior and posterior tilt are most visible at the scapula.

* The sagittal, left-to-right axis is located just below the upper quarter to upper third of the scapula.



anterior view



posterior view



MUSCLE

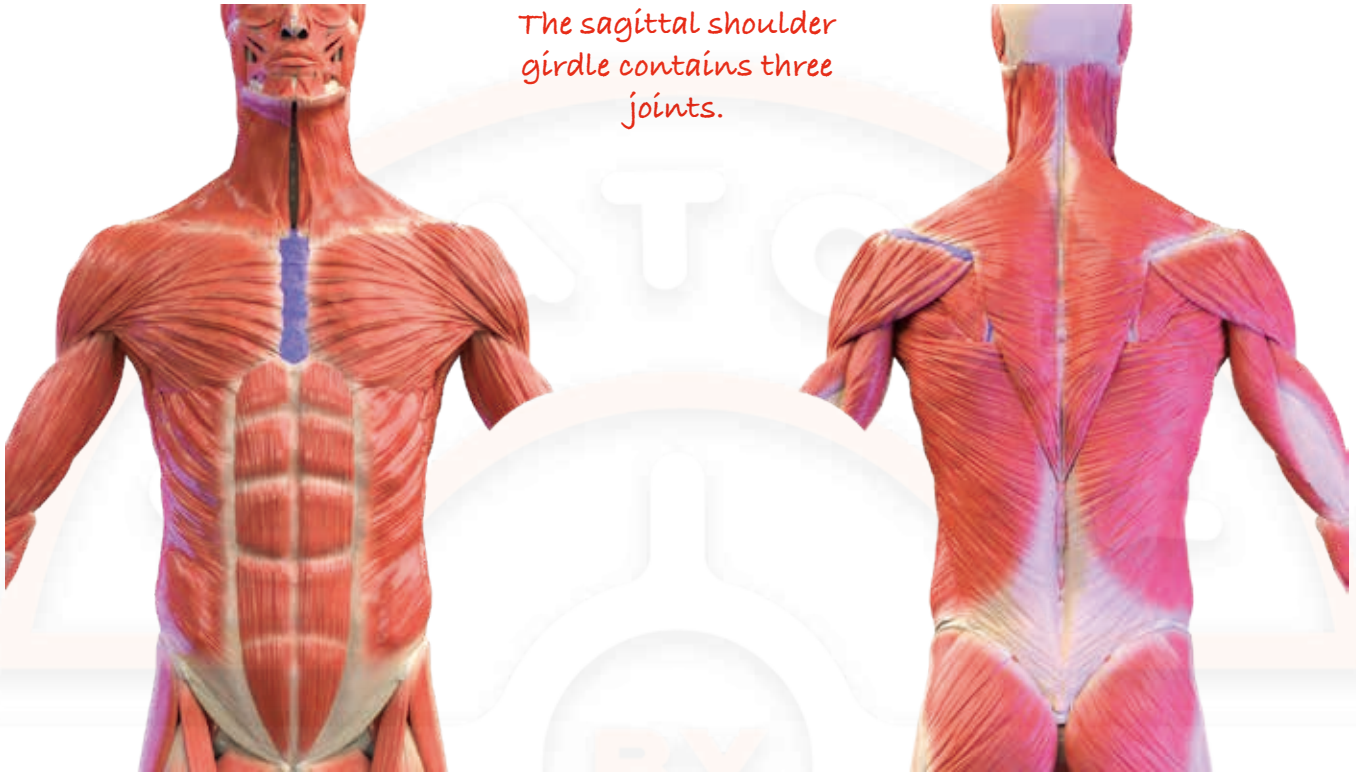
Joints

Sagittal shoulder girdle

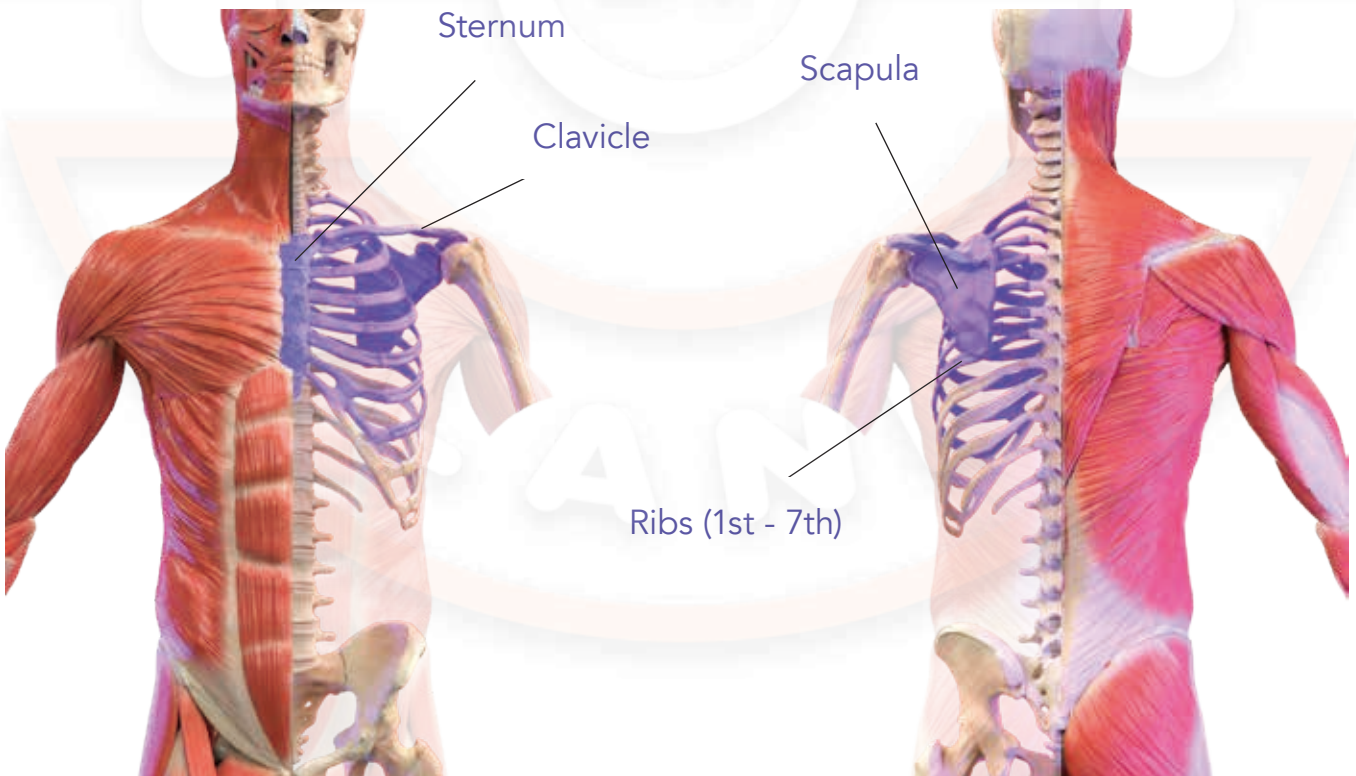
The sagittal shoulder girdle contains three joints.



JOINT



OVERVIEW



anterior view, **LEFT** shoulder girdle

posterior view, **LEFT** shoulder girdle

Acromioclavicular joint
(scapula to clavicle)

aka AC joint



anterior view, **LEFT** shoulder girdle



posterior view, **LEFT** shoulder girdle

These three joints
work together as
one!

aka SC joint

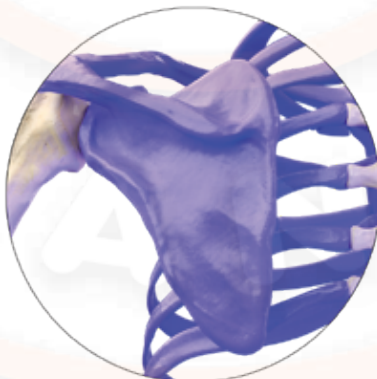
Sternoclavicular joint
(sternum to clavicle)

Scapulothoracic joint
(scapula to 2nd - 7th ribs)

The 1st rib is not part of the
scapulothoracic joint, but it
is included in this complex.



anterior view, **LEFT** shoulder girdle



posterior view, **LEFT** shoulder girdle



inferior
angle of
scapula

This is not a
traditional joint.

M
A
G
N
I
F
I
E
D

Anterior Tilters

Single-complex

DO NOT EXIST!

ANATOMY

BY

PLANES



Posterior Tilter

Single-complex

muscle that posteriorly tilts the scapula - it makes the scapula rest/sit on the ribs



There is **one** single-complex posterior tilter.



anterior view, **LEFT** shoulder girdle

posterior view, **LEFT** shoulder girdle

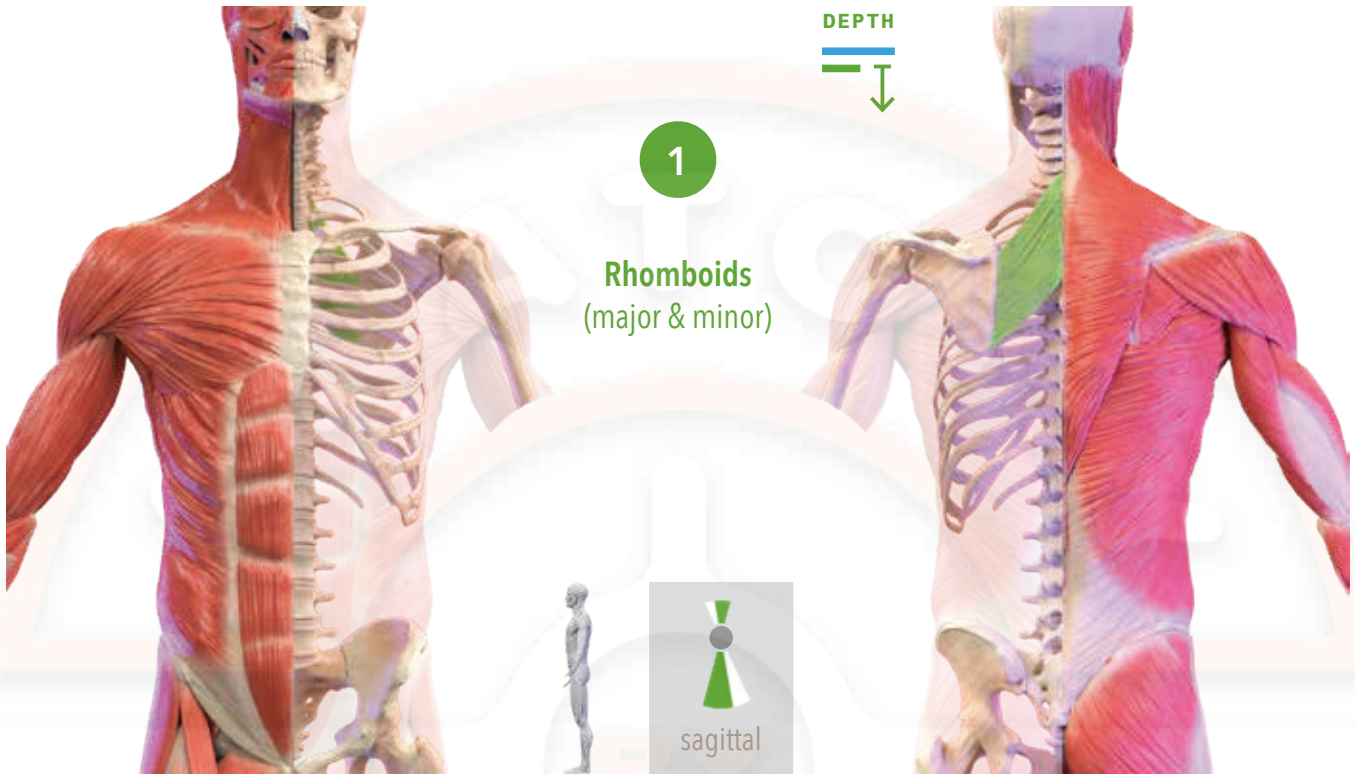


SKIN



MUSCLE

depth 2, deep to the skin
and 1 layer of muscle



S
F
T

13

MOTION

anterior view, **LEFT** shoulder girdle

posterior view, **LEFT** shoulder girdle

Anterior Tilter

Multi-complex

muscle that anteriorly tilts the scapula - it causes the scapula's inferior angle to pull away from the ribs



There is **one** multi-complex anterior tilter.

DEPTH



1

Pectoralis minor



sagittal

anterior view, **LEFT** shoulder girdle

posterior view, **LEFT** shoulder girdle



MUSCLE

S
F
T

13
12

MOTION



Posterior Tilters

Multi-complex

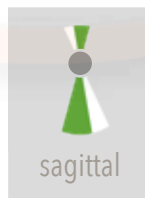


MUSCLE



There are *two* multi-complex posterior tilters.

OVERVIEW



anterior view, **LEFT** shoulder girdle

posterior view, **LEFT** shoulder girdle

The (front) upper part might be involved. Also.

The lower part of the trapezius tilts the scapula backwards.



1

Trapezius
(lower part, mostly)

DEPTH



sagittal

S
F
T
13
12
11
10
9

MOTION



2

Serratus anterior

DEPTH



sagittal

S
F
T
13
12

MOTION

anterior view, **LEFT** shoulder girdle

posterior view, **LEFT** shoulder girdle

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