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# **Funktionelle Anatomie**

Vorlesung 376-0905-00, FS 2013

## **C. Rumpf**

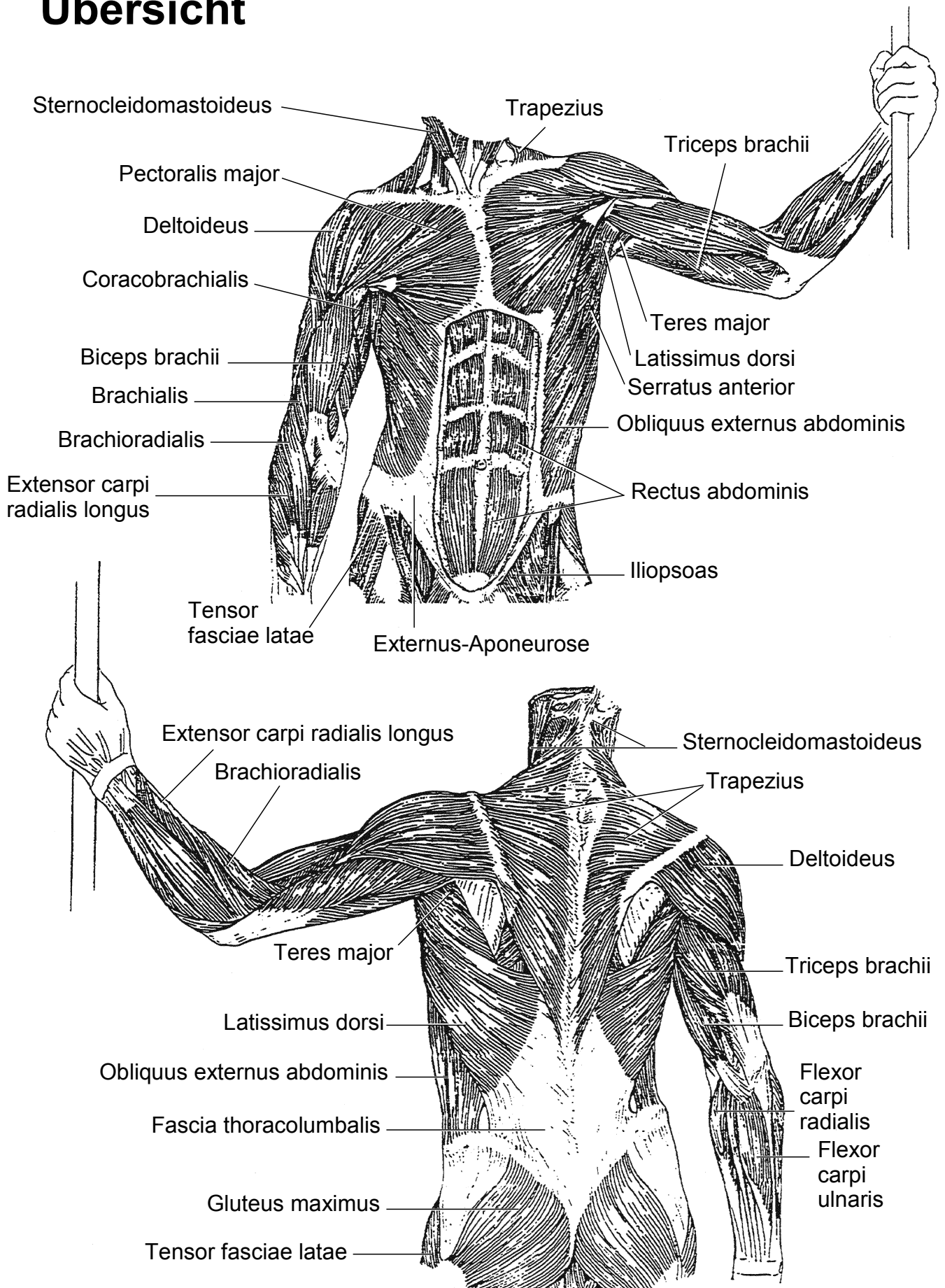
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**D.P. Wolfer, I. Amrein, A. Rhyner, M.M. Müntener**

Bei den Zeichenvorlagen handelt es sich zum Teil um modifizierte Abbildungen aus Lehrbüchern. Sie dürfen deshalb nur zur Mitarbeit in der Vorlesung verwendet werden. Es ist nicht gestattet, die Vorlagen zu vervielfältigen.

30.04.2013 Rumpf

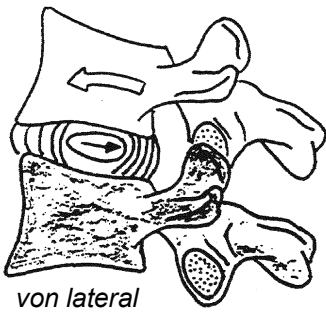
# Muskeln des Rumpfes und des Arms Übersicht



# Wirbelsäule

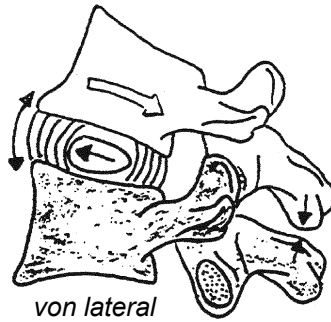
## Segment

**LWS**



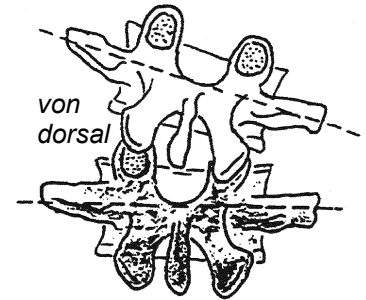
*von lateral*

Ventralflexion (= Flexion)



*von lateral*

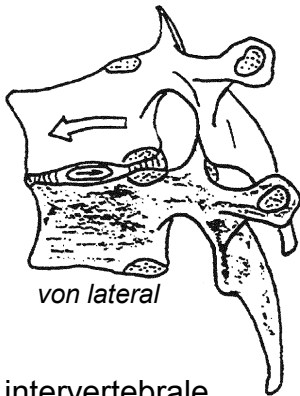
Dorsalflexion (= Extension)



*von dorsal*

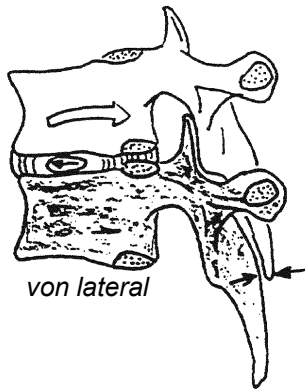
Seitenneigung

**BWS**



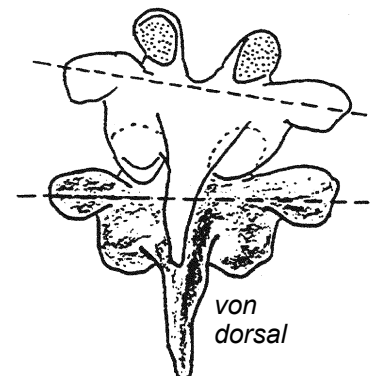
*von lateral*

Foramen intervertebrale  
Foramen vertebrale



*von lateral*

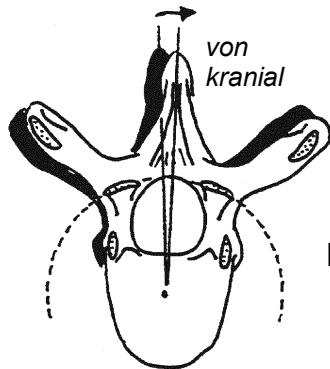
Rippengelenke



*von dorsal*

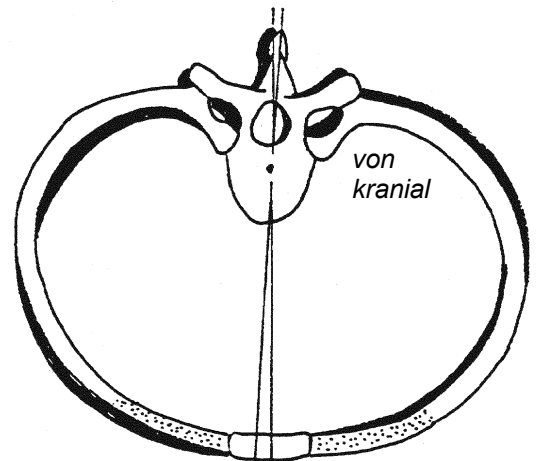
Spinalkanal

**BWS +  
Rippen**



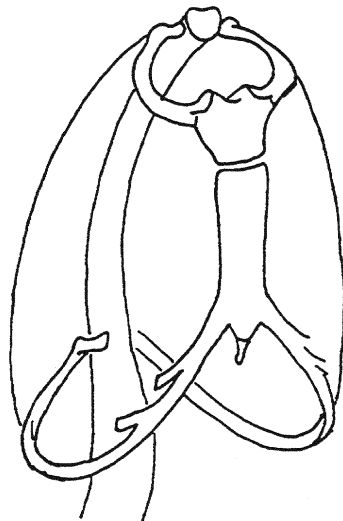
*von kranial*

Rotation

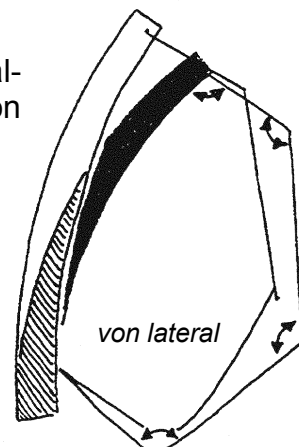


*von kranial*

**Thorax**

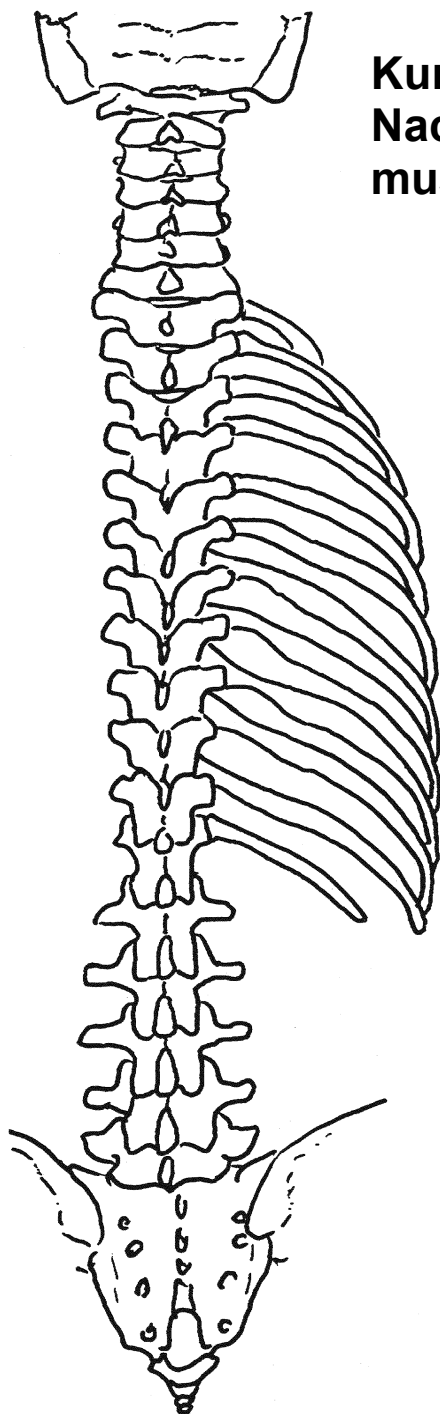


Ventral-  
flexion

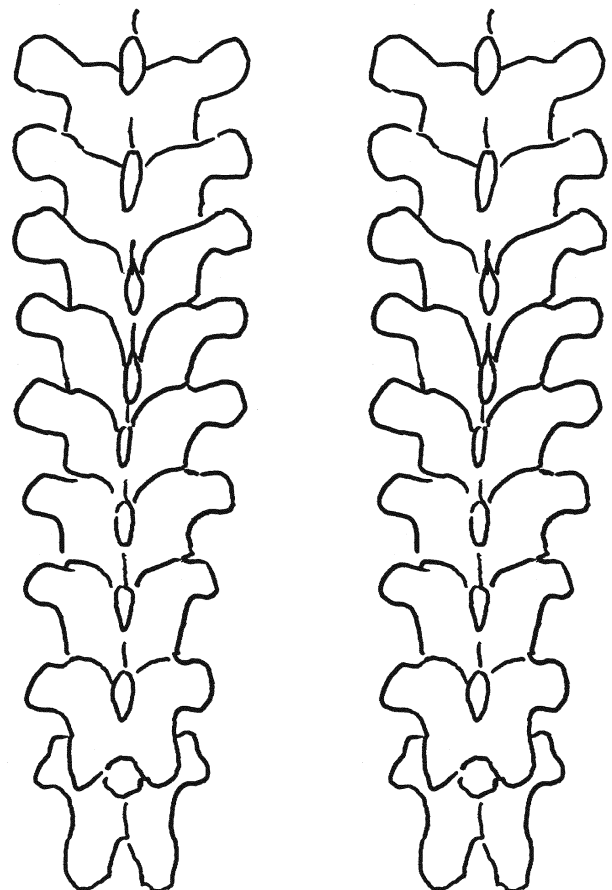
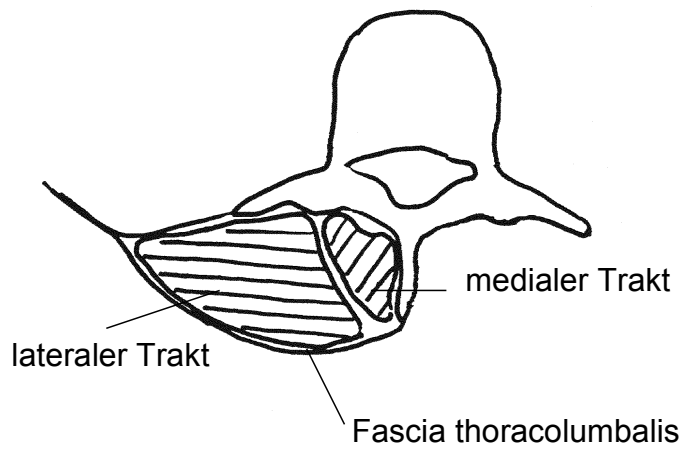


*von lateral*

# Autochthone Rückenmuskulatur (M. erector spinae)



**Kurze  
Nacken-  
muskeln**



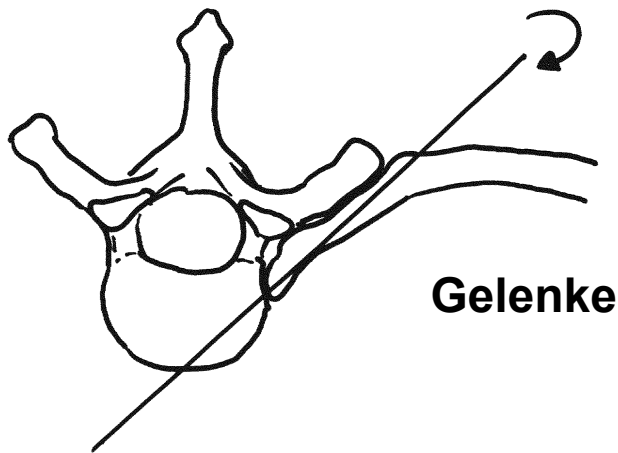
## **Lateraler Trakt:**

- M. longissimus
- M. iliocostalis
- kurze Muskeln
- M. splenius

## **Medialer Trakt:**

- spinales System  
(kurz, lang)
- transversospinales System  
(kurz, lang)

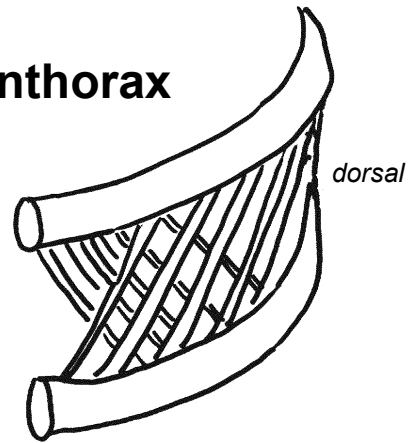
# Brustkorb (Thorax)



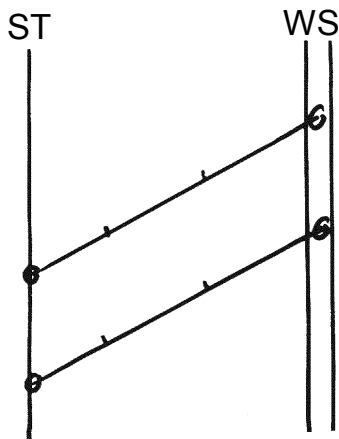
Gelenke

Drehachse

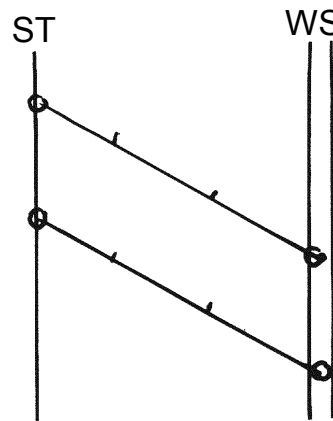
## Rippenthorax



M. intercostalis ext.  
M. intercostalis int.



Expiration

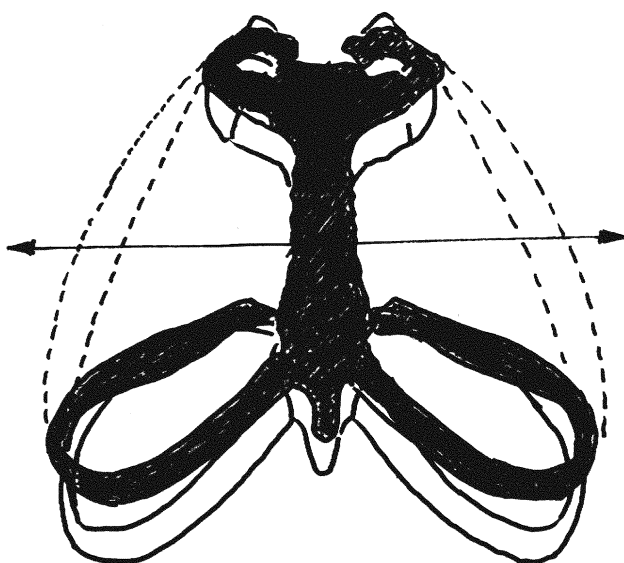


Inspiration

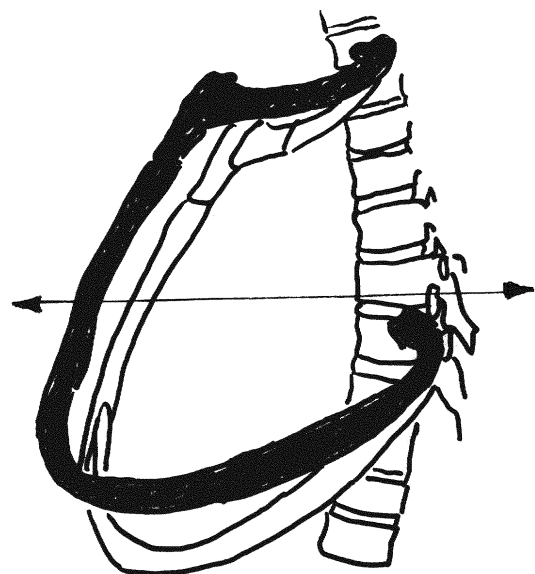
WS Wirbelsäule

ST Sternum

Gelenke o



von vorne

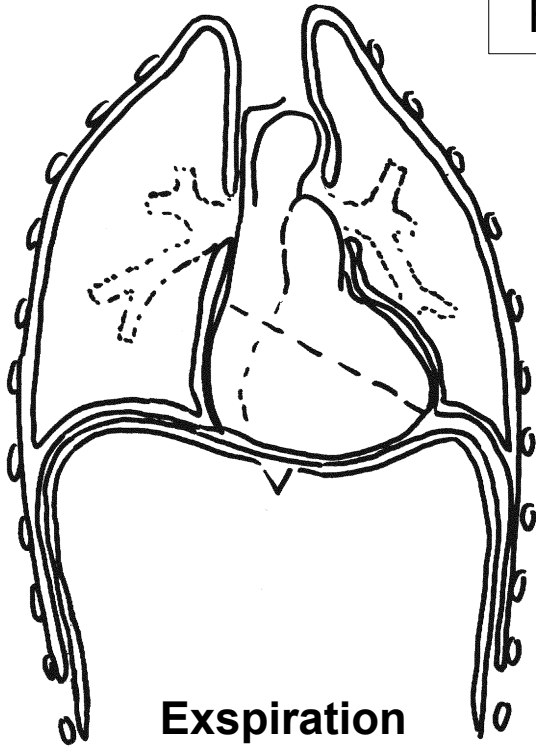


von lateral

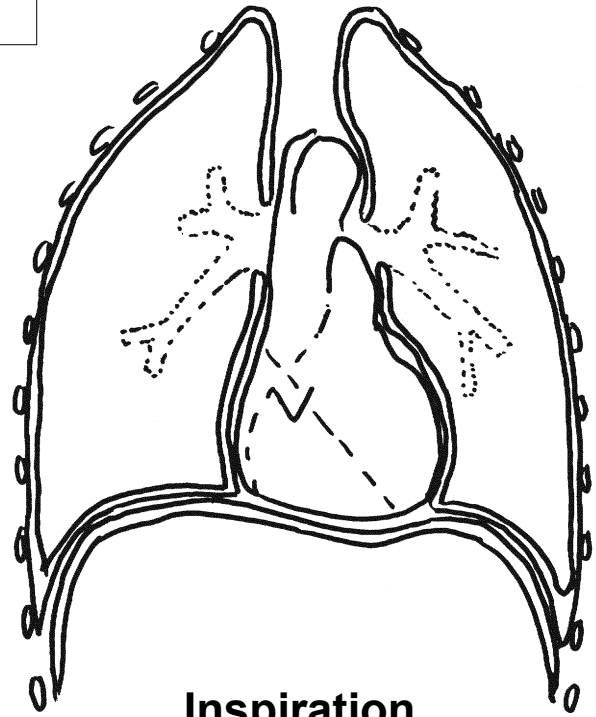
(inspiratorische Stellung dunkel)

# Zwerchfell (Diaphragma)

Frontal



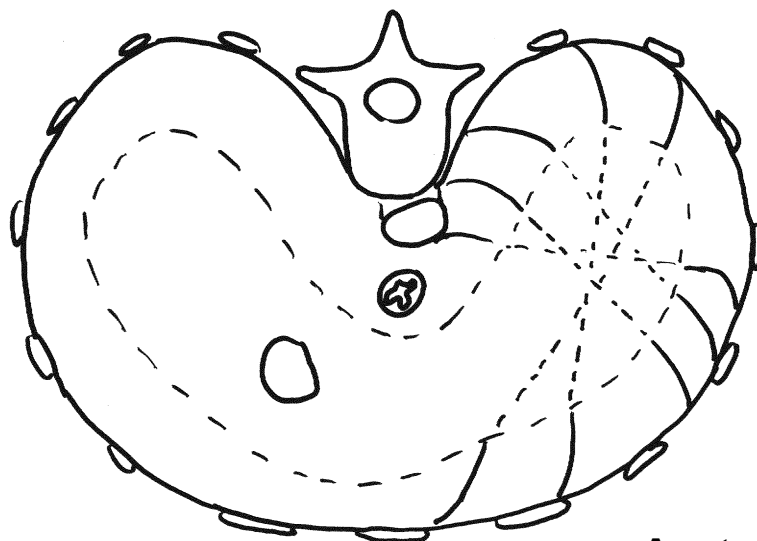
Exspiration



Inspiration

Aufsicht

Sehnenplatte

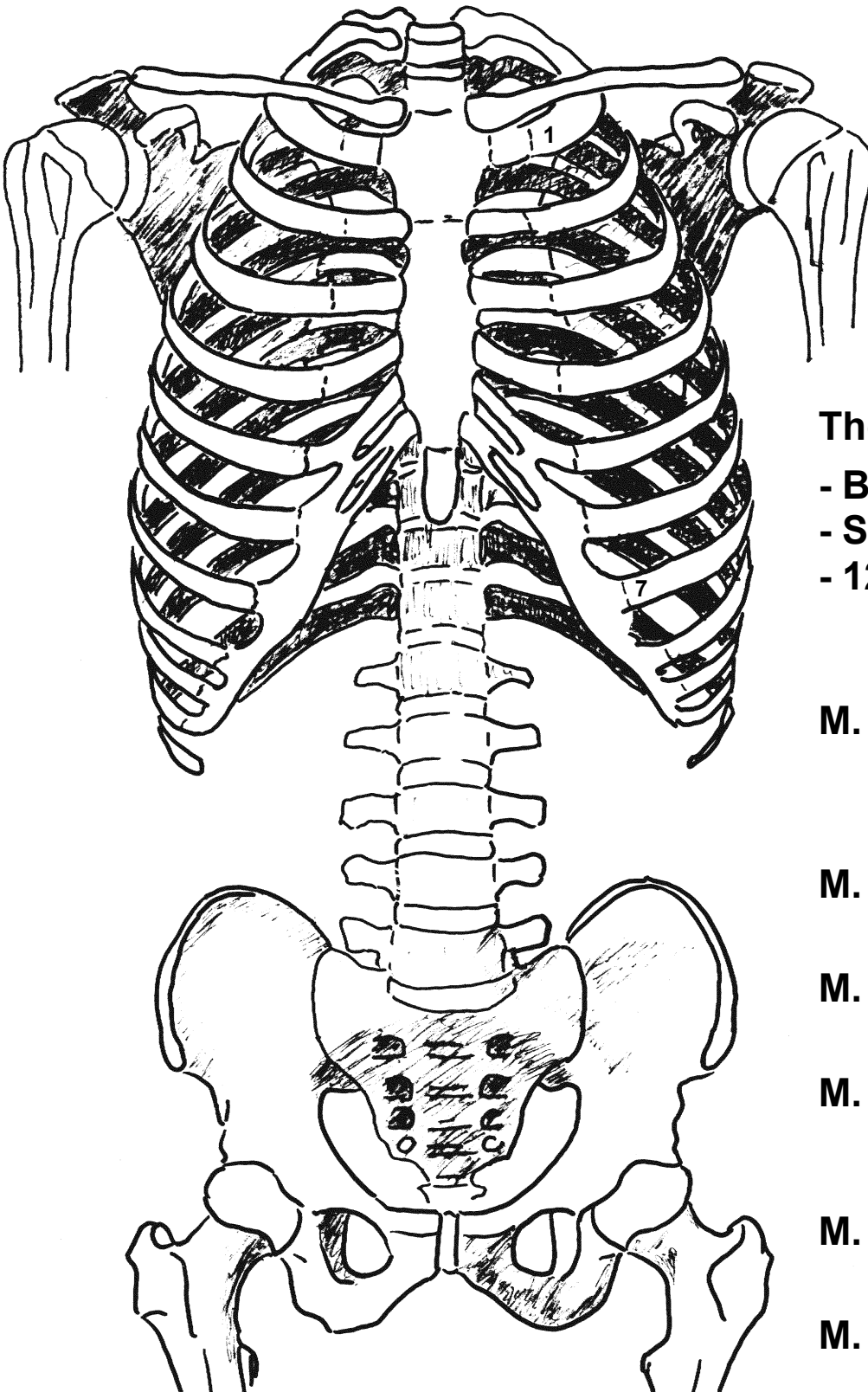


Unt. Hohlvene

Aorta

Speiseröhre

# Bauchmuskulatur I



**Thorax:**

- BWS
- Sternum
- 12 Rippen

**M. rectus abdominis**

**M. obliquus ext. abdominis**

**M. obliquus int. abdominis**

**M. transversus abdominis**

**M. quadratus lumborum**

**M. iliopsoas**

# Bauchmuskulatur II

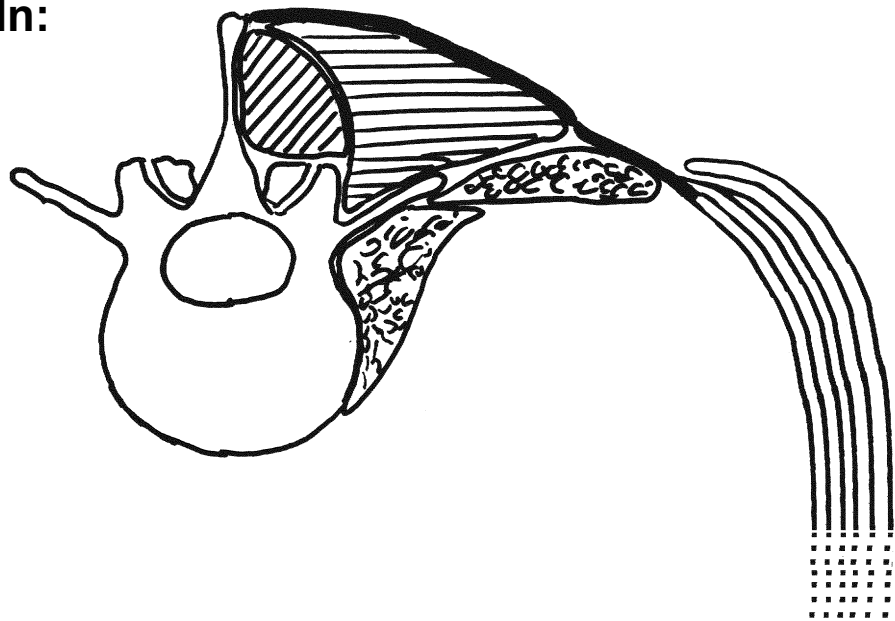
Fascia thoracolumbalis

M. erector spinae  
med. lat. Trakt

Hintere Muskeln:

M. quadratus  
lumborum

(M. psoas)

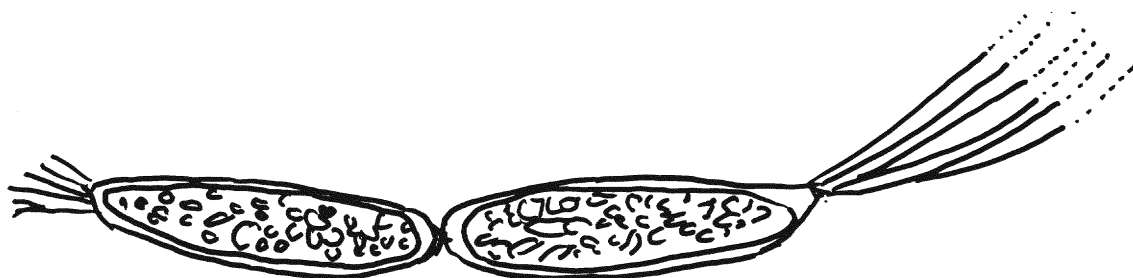


Seitliche Muskeln:

a) M. transv. abd.

b) M. obl. int. abd.

c) M. obl. ext. abd.



Rektusscheide

Vorderer Muskel:  
M. rect. abdom.



# Muskelfunktionen am Rumpf

(Hals und Kopfgelenke nicht berücksichtigt)

	Ventralflexion	Dorsalextension	Lateralflexion	Rotation	Inspiration	Expiration	Bauchpresse
M. erector spinae, lat. Trakt							
- M. splenius		+ <sup>1</sup>	+ <sup>2</sup>	+ <sup>2</sup>			
- übrige Muskeln		++ <sup>1</sup>	++ <sup>2</sup>				
M. erector spinae, med. Trakt							
- spinales System		++ <sup>1</sup>	+ <sup>2</sup>				
- transversospinal lang		++ <sup>1</sup>	+ <sup>2</sup>	+ <sup>3</sup>			
- transversospinal kurz		+ <sup>1</sup>		++ <sup>3</sup>			
Mm. intercostales interni						++	
Mm. intercostales externi						++ <sup>6</sup>	
Diaphragma					+++		+
M. quadratus lumborum			++ <sup>2</sup>				
M. rectus abdominis	+++ <sup>5</sup>				++	++	
M. obliquus ext. abdominis	++ <sup>1,5</sup>		++ <sup>2</sup>	++ <sup>3</sup>	++	++	
M. obliquus int. abdominis	++ <sup>1,5</sup>		++ <sup>2</sup>	++ <sup>2</sup>	++	++	
M. transversus abdominis				+ <sup>2</sup>	++	+++	
M. iliopsoas		+ <sup>4</sup>	+ <sup>2</sup>				
M. gluteus maximus	++ <sup>5</sup>						
ischiokrurale Muskeln	+ <sup>5</sup>						

<sup>1</sup> bei beidseitiger Kontraktion

<sup>2</sup> Oberkörper zur gleichen Seite bei einseitiger Kontraktion

<sup>3</sup> Oberkörper zur Gegenseite bei einseitiger Kontraktion

<sup>4</sup> Beckenkippung nach vorne, LWS Dorsalextension (Hyperlordose)

<sup>5</sup> Beckenaufrichtung, LWS Ventralflexion (Verminderung der Lordose)

<sup>6</sup> auch Mm. scaleni, sternocleidomastoideus, pectoralis major + minor