

CHANDKHURI, BALOD ROAD DIST-DURG (C.G)
Session – 2021-2022

# DEPARTMENT OF SHARIR RACHNA



# A COMPILATION WORK ON



**GUIDED BY** 

DR. RASHMI TIWARI

(Reader & H.O.D.)

DR. DHARAMPAL SINGH THAKUR

(Lecturer)

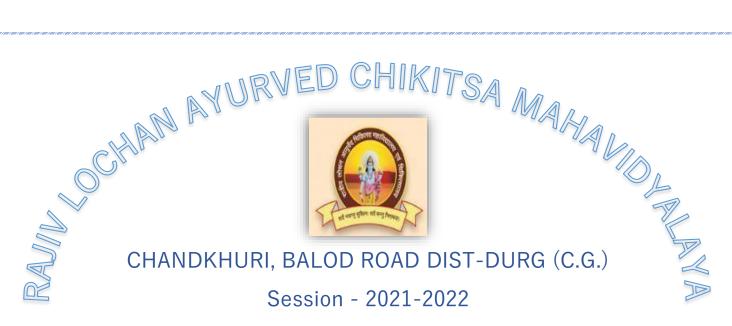
SUBMITTED BY

SHALINI KUMARI

B.A.M.S 1st PROFF.

19<sup>th</sup> BATCH

SESSION - 2021-2022



# **CERTIFICATE**

This is to certify Shalini Kumari has satisfactorily completed her Compilation work on पेशीशारीम् for the department of RACHNA SHARIR of Rajiv Lochan Ayurved Chikitsa Mahavidhyalaya & Chikitsalaya, Chandkhuri, Durg for the session 2021-2022.

**Signature of Student** 

Signature of H.O.D.

**Date of Submission** 

**Signature of Lecturer** 

# **ACKNOWLEDGEMENT**

Foremost acknowledgement is the greatfulness to god for the guidance and generosity in getting the compilation done. I am greatful to **Dr. Rashmi Tiwari (Reader & H.O.D.)** & **Dr. Dharampal Singh Thakur (Lecturer)** of department of RACHANA SHARIR.

Medical College, chandkhuri, Durg, which provided us with such a wonderful library where all our book requirements are satisfied, in searching the relevant topic in different books. The unquestionable support of seniors and moral support of the family lead to the completion of the compilation within time.

# पेशीशारीम्

व्युत्पत्ति - पिश् + इन् , पेशी + दीष् उत्पत्ति - "अनुप्रविश्य पिशित पेशीविंभज्ञते तथा" (सु . ना 4/28)

**पित्तयुक्त** वायु अविभक्त मांस खण्ड (पिशित) में प्रविष्ट होकर उसे विभक्त कर पेशी (विभक्त मांस खण्ड) की उत्पत्ति करती हैं।

उत्पत्ति - '' वायु पिशित मांस अनुप्रविष्य पेशी व्रिभज्ञते पेशी मांसखण्डम् ।।'' (डल्हण सु.शा 4/28) vibhargayate

अर्थात वायु मांस धातु में प्रविष्ट होकर उन्हें पेशी के आकार में परिवर्तित कर देती हैं।

शरीर में सात धातुएं है उन में से यह तीसरी धातु है। शरीर में अस्थियों पर तथा आशयो या अवयवों में ये मांस खण्ड पाये जाते है।

## परिभाषा

पेशी दीर्घमास पेश्याकार (चक्रपाणि)

दीर्घ आकार की मांस धातु से निर्मित रचना को पेशी कहते हैं, पेशी मांस धातु की बनी होती है, तथा इसका निर्माण रक्त धातु पर मांसग्नि की क्रिया से होता है|

# पेशियों का महत्व

# 1) "मांस शरीरपृष्टि मेदसक्ष" (सु. सू 15/7)

मांस शरीर एवं मेद धातु की पुष्टि करता है।

# "सिरारनाय्वस्थिपवांणि सन्धयक्ष शरीरिणाम।

पेशीभि संवृतान्यत्र बलवंती भवन्त्यत: ।।" (सु. ना 5/49)

शरीर (धारियों) की सिराये, स्नायु, अस्थिपव और संधियों पेशियों से ढकी रहती है, अर्थात पेशियों इन्हें आवृत करती है। जिससे वे बलवती होती है|

# 3) " मांसपेश्योबलाय स्युरवष्टम्भाय देहिनाम्।

प्रसारणाकुन्चनयोरङ्गमा कण्डरा मता।।" (शाईगधर पू 5/62)

मांस पेशी शरीर में बल को उत्पत्ति करती है तथा शरीर को इढता प्रदान करती हैं। आचार्य ने आकुचन एव प्रसारण आदि कियाओं का सम्पादन कण्डरा के द्वारा होना बताया है, और अधिकतर पेशियां निवेश स्थान पर कण्डरा में परिवर्तित हो जाती है। इस प्रकार कण्डरा मूल रूप से पेशी का ही एक भाग है। अतएव आकूचन प्रसारण आदि चेष्टाओं को हम पेशियों के अंतर्गत समाहित करते है।

## पेशी के प्रकार

# तासां बहलपेलवस्थूलाणुपृथुवृत्तहूस्वदीहीस्थिरमृदुलक्ष्णकर्कशभावा: सन्ध्यस्थिसिरास्नायुप्रच्छादका यथाप्रदेश स्वभावत एव भवंति॥" (सु,ना 5/52)

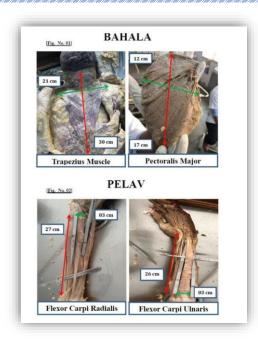
आचार्य सुश्रुत ने स्वभाव के अनुसार पेशियों के 12 प्रकारों का वर्णन किया गया है।

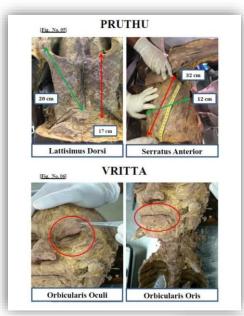
- 1) बहल (Large) याने घनी और मोटी।
- 2) पेलव (small) याने महीन, पतली कमजोर नाजुक
- 3) स्थूल (Thick) याने मोटी तथा अधिक मास युक्त
- 4) अणु (Thin) याने छोटी पतली या बारीक
- 5) पृथु (Broad/flat) याने विस्तृत चौड़ी तथा बड़ी
- 6) वृत्त (Rounded) याने गोल आकार वाली।
- 7) हस्व (Short) याने लंबाई में काम या छोटी।
- 8) दीर्घ (Long) याने अधिक लंबी
- 9) स्थिर (Firm) याने काम गति करने वाली।
- 10) मृदु (Soft) याने कोमल या नरम।
- 11) श्रक्षण (Smooth) याने चिकनी।
- 12) कर्कश (Rough) याने पुरुष, खुरदरी या कठिण।

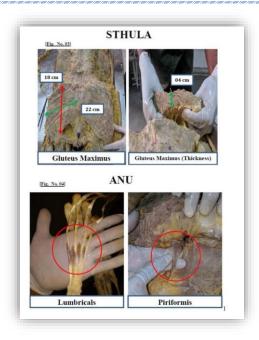
According to modern 1 ) बहल (large) - Gluteus maximus, Adductor magnus

- 2) पेलव (Small) Tensor fascia latae, Abductor digiti minimi, Lumbricals, plantar and Dorsal interesses
- 3) ম্থুল (Thick) Psoas major, Gluteus maximus, Adductor magnus, Gastrocnemius, Saleus.
- 4) अणु (Thin) Apcticularis genu, Peroneus tertius

  Cremaster, Abductor digile minimi, flexor digiti minimi brevis.
- 5) पृथु (Broad) Illiacus, Pectineus, Popliteus, flexor digitoram accessorius Transversus abdominus, Internal oblique, External oblique aponecroses.
- 6) वृत्त (Rounded) Gastrocnemius, Soleus, Cremaster
- 7) हस्व (Short) Adductor brevis, Peroneus tertius, Peroneus brevis. Plantaris.
- 8) दीर्घ (long) Psoas major, Tensor fascia latae, Rectus femoris.
- 9) स्थिर (Firm) Koshthangata Peshis
- 10) मृद् (sort) Kushthangata peshis
- 11) শ্বস্থা (Smooth) All Smooth muscle.
- 12) कर्कश (Rough) All Skeletal muscle











# पेशी संख्या

" पांच पेंशीशतानि भवन्ति " (सु. शा 5/45)

आचार्य सुश्रुत ने शरीर मे पेशियों की संख्या पाँच सो बताई है, जबकि स्त्रियों मे 20 अधिक पेशियो का वर्णण किया है।

# षडंग मे पेशी संख्या

" तासां चत्वारी शतानि शाखायु कोष्ठे षट्पष्टि; ग्रीवा प्रयुर्खे चतुस्त्रिंशत । " (सु.शा 5/45) इस प्रकार चार शाखाओं मे चार सौ कोष्ठ मे 66 तथा ग्रीवा से ऊपर चौतिस (34) पेशिया होति है |

| क्रम संख्या | षडंग                                    | पेशी संख्या |
|-------------|---|-------------|
| 1.          | शाखा (चत्वारी शतनि शाखासु)              | 400         |
| 2.          | कोष्ठ (कोष्ठे षट्षष्टि)                 | 66          |
| 3.          | (उर्ध्वजत्रुगत प्रत्यूध्वे चतुस्त्रिशत) | 34          |
|             |   | 500         |
|             | याग                                     | 500         |

# शाखागत पेशियां

" एकैकस्यां तु पादामल्यां तिस्त्ररितस्त्रस्ताः फचदश, दश प्रपदे, पादोपारि वर्चसन्निविष्टास्तावाय एवं, दूश गुल्फत्लयो गुल्फजान्वन्तरे विशतिः फच जानुनि, विशंतिखरी, दश वंक्षणे शतमेवमेकस्मिन् सिक्थन भवन्ति। एतेनेतर सिक्थबाहूच व्याख्याती ॥" (सु. शां 5/46)

| क्रम संख्या | अंगावयव                     | सुश्रुतानुसार संख्या    | पेशी संख्या       |
|-------------|-----------------------------|-------------------------|-------------------|
| 1.          | पैर की प्रत्येक अंगुली      | पादागुयातित्ररित        | $3 \times 5 = 15$ |
|             | मे तीन – तीन                | स्त्ररता फचदश           |                   |
| 2.          | पाव के अग्रभाग प्रपाद मे दश | दश प्रपदे               | 10                |
| 3.          | पाव के ऊपर कूर्च मे दश      | पादोपरि कूर्चरानिविष्टा | 10                |
|             |                             | स्ताकय एवं              |                   |
| 4.          | गुल्फ एवं पादवल मे दश       | गुल्फल्लयो:             | 10                |
| 5.          | गुल्फ एवं जानु के मध्य बीस  | गुल्फ जान्वन्तरे विशति: | 20                |
| 6.          | जानु में पांच               | फच जानुनि               | 5                 |
| 7.          | ऊरु में बीस                 | विंशतिरूरौ              | 20                |
| 8.          | वक्षण मे दश                 | दशवंक्षणे               | 10                |
|             | योग                         |                         | 100               |

इस प्रकार एक पैर (सिक्थ) मे सौ (100) पेशिया होती है चार सखाओं में (4 x 100 400) पास चार सौ (400) पेशिया होती है |

## Comparison with Modern

- 1. शाखागत पेशियां
  - 1 पादअंगुलि पेशी (15)

15 tendinous insesition of muscle.

2. प्रपदे पेण

(10)

It has 10 Peshi, according to classical texts.

According to modern in 15 muscle were found in this region

- 2 head of adductor hallucis
- 4 lumbricals.
- 4 dorsal interosses
- 3 plantas interosse,
- flexor hallucis brevis
- flexor digiti minimi brevis

- 3. पादोपरि पूर्च 'पेशि
- 4 muscle were found in docum

(10)

- 1) Extension halluGs longus
- 2) Exterste hallvas brevic
- 3) Extensos digitorum Longus Longus
- 4) Extensor digitorum brevis

4 tendons of Extensor digitorum brevis... may

be considered as Kurcha

4. गुल्फ तल्यो पेशि (10)

Origin of 5 muscle

2 heads of flexor digitorum

Abductor halucis Flexor digitorum brevis Abductor digiti minimi 10 Peshi in this region were difficult to find charyas may have taken muscle fascicule into Considation.

गुल्फ जान्वन्तरे पेशि
 (20)

• Muscle of the anterar, posterior and laterial Compartments of the leg- were found in this region except the plantaris.

Total 13 muscle were found in this region, including the two heads of gastronemius and Excluding the tendon of Plantaris

6. जानु प्रदेश पेशि

(5)

5 muscles including the two heads of gastrocnemius in the Knee joint plantaris and insertion of Sartorius and gracillis.

7. ऊरु प्रदेश पेशि

(20)

medial and posterior Compartment. of thigh,

3 muscle from gluteal region Obturator Externus,

tensor fascia latal and gluteus maximus.

8. वक्षण पेशि (10)

External oblique aponecrosis. internal oblique

transverse abdominis.

Cremaster, Illiacus,

Psoas major, Pectineus.

# कोष्ठगत पेशियां

" तिस्त्र: पायौ, एका मेद्रे, सेवन्यां चापरा, द्वे वृषणयो: स्फिचो: पञ्च पञ्च, द्वे वस्तिशिरसि पञ्चोदरे गाभ्यामेका, पृष्ठीधर्वसन्नि विष्टा:, पञ्च पञ्च दीर्घा: षट् पार्खयों; दश वक्षसि, अक्षकांसौ प्रतिसमन्तात् सप्त, द्वे हृदयामाशययो:, षट् यकृत्प्ली होण्डुडेषु " (सु. शा 5/47)

# इस प्रकार कोष्ठ में कुल छांसठ (66) पेशियां होती है।

|      | · ·                            |                         |                   |
|------|--------------------------------|-------------------------|-------------------|
| क्रम | अंगावयव                        | सुश्रुतानुसार संख्या    | पेशी संख्या       |
| 1.   | गुदा में तीन                   | तिस्त्र पायौ            | 3                 |
| 2.   | श्शिन में एक                   | एकामेद्रे               | 1                 |
| 3.   | सेवनी मे एक                    | सेनन्यां चापरा          | 1                 |
| 4.   | वृषण मे दो                     | द्वे वृषण्यो            | 2                 |
| 5.   | स्फिग में पांच                 | स्फिचो: पंच पंच         | $5 \times 2 = 10$ |
| 6.   | वस्ति शिर मे दो                | द्वे वस्ति शिरसि        | 2                 |
| 7.   | उदर मे पांच                    | पंचोदरे                 | 5                 |
| 8.   | नाभि में                       | नाभ्यामेका              | 1                 |
| 9.   | पृष्ठ के उर्ध्व भाग            | पृष्ठोर्ध्व सन्निविष्टा | $5 \times 2 = 10$ |
|      | मे दोनो और दीर्घ पेशी पांच     | पंच पंच दीर्घा :        |                   |
| 10.  | पाश्र्व मे छ:                  | षट् पार्श्वयो:          | 6                 |
| 11.  | वक्ष मे दश                     | दश वक्षसि               | 10                |
| 12.  | अक्षक एवं कंधे के              | अक्षकांसौ प्रति         | 7                 |
|      | आस-पास सात                     | समन्तात सप्त            |                   |
| 13.  | ह्दय एवं अमाशय मे दो           | द्वे ह्दयामाशयसो:       | 2                 |
| 14.  | यकृत, प्लीहा एवं उण्डुक में छः | षट् यकृतप्लीहोण्डुकेषु  | 6                 |
|      |                                |                         |                   |

# 2. कोष्ठगत पेशियां

1. गुदा में तीन - External & Internal spinchter - Transverse perineal muscle - Levator ani श्शन - Corpora Cavarnosa Corpora Spongiosum **(1)** Acharaya have considered only one but according to modern two muscle considered. 3. सेवनी Sutures **(1)** 4. वृषण - Dartos muscle (2) Cremasteric muscle 5. स्फिग - Gluteus maximus (5) - Gluteus medius - Gluteus minimus - Illiacus - Tensor fascia latal 6. वस्ति शिर (2) 7. उदर - Transverse abdominis (5) - Rectus abdominis - External Oblique - Internal Oblique - Diaphgram 8. नाभि Median umblicial ligament **(1)** 9. पृष्ठ उर्ध्व - Rhomboid major  $(5 \times 2)$ - Rhomboid minor - Trapezius - Levator Scapulae - Lattisimus Dorsi

| 10. पाश्र्व                 | - Serratus anterior            |
|-----------------------------|--------------------------------|
| (6)                         | - Levator Scapube              |
| (3x2)                       | - External Oblique             |
| 11. वक्ष                    | - Pecturalis major             |
| (10)                        | - Sternocleidomastoid          |
|                             | - Pectoralis minor             |
|                             | - External intercoastal        |
|                             | - Internal intercoastal        |
|                             | - Transverse thoragic          |
|                             | - Subclavius muscle            |
|                             | - Exector spinal               |
|                             | - Longissimus                  |
|                             | - Subcoastalis muscle          |
| 12. कंधे के आस-पास          | - Infraspinatus                |
| (7)                         | - Supraspinatus                |
|                             | - Deltoia                      |
|                             | - Coracobrachialis             |
|                             | - Long head of triceps brach   |
|                             | - Teres minor                  |
|                             | - Teres major                  |
| 13. ह्दय एवं अमाशय          | - Cordiac & Smooth muscle      |
| (2)                         |                                |
| 14. यकृत, प्लीहा एवं उण्डुक | Falciform ligament, ligamentum |
| (6)                         | ligamentum terea venosum       |
|                             | Coronary ligament              |
|                             | triangular ligament            |
|                             |                                |

# उर्ध्वजत्रुगत पेशियां

" ग्रीवायां चतस्त, अष्टौ हन्वोः एकैका काकलक काकलकगलयो द्वे तालुनि,एका जिछायाम् ओष्ठयोद्वे नासायां द्वे, द्वे नेत्रयों: गण्डयोश्चतस्त्र: कर्णयोद्वें, चतसत्रो ललाटे, एकाशिरसीनि, एवं मेतानि पञ्च पेशीशतानि। " (सु शा 5/48)

| क्रम संख्या | अंगावयव               | सुश्रुतानुसार संख्या | पेशी संख्या |
|-------------|-----------------------|----------------------|-------------|
| 1.          | ग्रीवा मे चार         | ग्रीवायां चतस्त्र:   | 4           |
| 2.          | हनु मे आठ             | अष्टौ हन्वौ          | 8           |
| 3.          | काकलक और गले ते एक-एक | एकैका काकलक गलयों    | 1+1=2       |
| 4.          | तालु में दो           | द्वे तालुनि          | 2           |
| 5.          | जिव्हा मे एक          | एका जिव्हायामं       | 1           |
| 6.          | ओठ में दो             | ओष्ठयोद्वें          | 2           |
| 7.          | नासा में दो           | नासायां द्वे         | 2           |
| 8.          | नेत्र में दो          | द्वे नेत्रयों:       | 2           |
| 9.          | कपोल में चार          | गण्डयोश्चतस्त्र      | 4           |
| 10.         | कानों में दो          | कर्णयोद्वें          | 2           |
| 11.         | ललाट में चार          | चतसत्रो ललाटे        | 4           |
| 12.         | शिर में एक            | एका शिरसीति          | 1           |
|             |                       | योग                  | 34          |

इस प्रकार शिर एव ग्रीवा में चौतीस (34) पेशियां होती है तथा सम्पूर्ण शरीर में पांच सै (500) पेशियां होती हैं।

# उर्ध्वजत्रुगत पेशियां

10. कानों (2)

1. ग्रीवा मे - Thyrohyoideus **(4)** Omohyoideus Sternocleidomastordeus Sternohyoideus - Mentalis 2. हनु (8) - Depressor labi inferioris - Depressor anguli aris - Platysma - Modiolus - Risorius - Levator anguli oris - Levator labii superioris 3. काकलक और गले ते एक-एक - Sternocleidomastoid 4. तालु (2) - Tensor veli Palatini - Levator veli palatini 5. जिव्हा (1) - Hyoglossus 6. ओठ (2) - Orbicularis Oris a. Intrinsic part b. Extrinsic part 7. नासा (2) - Procerus - Nasalis (Transverse & Alar) 8. नेत्र (2) - Orbicularis Oculr 9. कपोल (cheek) - Buccinator **(4)** - Zygomaticus - Masseter

- Risorius

- Extrinsic & Intrincus muscles

11. ललाट (4)

- Temporalis, frontal bery of Occipitorrontalis, Galla aponeurotica, Epicranius frontalis

12. शिर (1)

- Epicranial aponeurosis

# स्त्रियों की अधिक पेशियां

**" स्त्रीणां तु विंशतिरधिका "** (सु शा 5/50) स्त्रियों मे पुरुषों की अपेक्षा बीस (20) पेशियां अधिक होती है।

**" दशा वास्त स्तनयोरेकैकस्मिन पञ्च पञ्चेति, यौवने तासां परिवृद्धि: । "** (सु शा 5/50) स्तनों में दश (10) पेशियां होती है। जिनमे प्रत्येक स्तन मे पांच पेशियां होती है, जिनकी यौवनारम्भ मे वृद्धि होती है |

"अपत्यपथे, चतस्त्र: तासा प्रसृतेऽभ्यन्तरतो द्वे मुखाश्रिते वाह्चे च वृत्ते द्वे, गर्भीच्छद्रसंश्रितास्तिस्त: शुक्रार्तवप्रवेशिन्यस्तिस्त एवं।" (सु शा 5/50) अपत्यपथ मे चार पेशियां होती है, जिनमें दो अन्दर की ओर फैली रहती है, तथा दो बार की ओर फैली रहती हे तथा दो बाहर की ओर मुख पर आश्रित होती है। इनके अतिरिक्त तीन पेशिया गर्भीच्छद्र पर आश्रय करती है और शेष तीन शुक्र आर्तव को प्रविष्ट कराती है।

| क्रम संख्या | अगावयव                   | सुश्रुतानुसार संख्या          | पेशी संख्या   |
|-------------|--------------------------|-------------------------------|---------------|
| 4           |                          |                               | <b>7.0</b> 10 |
| 1.          | रतनों में दश             | स्तनगोरेकैकरिमन पच पञ्चेति    | 5x2 = 10      |
| 2.          | अपत्यपथ मे चार           | अपत्यपथे चतस्रः               | 4             |
| 3.          | गर्भच्छद्र पर आश्रित तीन | गर्भीच्छद्रसंश्रितास्तिस्त्र: |               |

# स्त्रियों की अधिक पेशियां

- 1. स्तनों में दश (5x2) Lobes of mammary gland, suspensory ligament of breast, Adipose tissue, lactiferous duct, cooper's ligament
- 2. अपत्यपथ मे चार (2x2) Outermost smooth muscle fibre innermost circular fibre
- 3. गर्भीच्छद्र में तीन Labia majora, labia minora spincter of vaginal
- 4. शुक्र एव आर्तव को Fundus, Corpus and isthmus of uterus. प्रविष्ट करने वाली (3)

#### **MUSCLES**

Derivation of Name

Muscles (L Mus = mouse) are so named because many of them resemble a mouse with their tendons representing the tail.

#### **Definition**

Muscles is a contractive tissue which brings about movements.

#### **Classification of Muscles**

Human body has more than 600 muscles. Muscles preforms many useful functions and help us in doing every thing in day to day life.

Muscles are classified by those different methods based on different factors.

- 1. Depending upon the presence or absence of striations.
- 2. Depending upon the control.
- 3. Depending upon the situation.

## 1. Depending upon the Striation

Depending upon the presence or absence of cross-striations, the muscle are divided into two groups

- i. Striated muscle
- ii. Non-Striated muscle

#### i. Striated Muscle

Striated muscle is the muscle which has a large number of cross striations, skeletal muscle and cardiac muscle belong to this category.

#### ii. Non-Striated Muscle

Muscle which does have cross-striations is called non-striated muscle. It is called plain muscle or smooth muscle. It is found in the wall of the visceral organ.

### 2. Depending upon control

Depending upon control, the muscle are classified into two types:

### i. Voluntary Muscle

Voluntary muscle is the muscle that is controlled by the will. Skeletal muscles are the voluntary muscle. These muscles are innervated by somatic nerves.

### ii. Involuntary Muscle

Muscle that cannot be controlled by the will is called involuntary muscle. Cardiac muscle and smooth muscle are involuntary muscle. These muscles are innervaled by autonomic nerves.

## 3. Depending upon Situation

Muscles are classified into three types

- i. Skeletal Muscle
- ii. Cardiac Muscle
- iii. Smooth Muscle

#### i. Skeletal Muscle

Skeletal muscle is situated in associated with bones forming the skeletal system. The skeletal muscles from 40% to 50% of body mass and are voluntary and striated These muscles are supplied by somatic nerve fibers of the skeletal muscles are arranged in parallel.

### ii. Cardiac Muscle

Cardiac muscle form the musculature of the heart. These muscles are striated and involuntary. Cardiac muscle are supplied by autonomic nerve fiber.

### iii. Smooth Muscle

It is situated in association with visera. It is also called Visceral muscle. Smooth muscle supplied by autonomic nerve fibers. Smooth muscle from the main contractive units of wall of the various visceral organs.

#### **Parts of Muscle**

#### A. Two ends

- **1. Origin** It is one end of the muscle which mostly remains fixed during its contraction.
- **2. Insertion** It is the other end which mostly moves during its contraction. In the limb muscles, the origin is usually proximal to insertion.

### B. Two parts

- **1. Fleshy part** is contractive and is called belly.
- **2. Fibrous part** is non-contractile and inelastic. When cord-like or repe-like, it is called tendon when flartened, it is called aponeurosis.

#### **Functions of the muscle tissue:**

Through sustained contraction or alternating contraction and relaxation muscle tissue has four key functions. It produces body movements, stabilizes body positions, stores and moves substances within the body and generates heat.

- **1. Producing body** movements Movements of the whole body such as walking and running and rely on, integraded functioning of bones joints and skeleton muscles .
- **2. Stabilizing body positions** Skeleton muscle contraction stabilize joints and help maintain body positions such as standing or sitting.
- **3. Storing and moving substances within the body** Sustained contractions of ring like bands of smooth muscle called spinchter may prevent outflow of the contents of a hollow organ.
- **4. Generating heat** As muscle tissue contracts, it produces heat, a process known as thermogenesis.

## Properties of muscle tissue

Muscles tissue has four special properties that enable it to function and contribute to homeostasis.

- **1. Electrical excitability** It is the property of both muscle and nerve cells is the ability to respond to certain stimuli by producing electrical signal such as action potential .
- **2. Contractility** It is the ability of the muscle tissue to contraction forcefully when stimulated by an action potential.
- **3. Extensibility** It is the ability of muscle to stretch without being damaged. Extensibility allows a muscle to contract forcefully even if it is already stretched.
- **4. Elasticity** It is the ability of muscle tissue to return to its original length and length and shape after contraction or extension.

#### Structure of Skeletal muscle

#### Muscle mass

Muscle mass or muscle tissue is made up of large number of individual muscle cells or myocytes. Skeletal muscle fibers are multinucleated and are arranged parallel to one another with some connective tissue in between

- => Muscle mass is separated from neighboring tissues by a thick fibrous tissue layer known as fascia.
- => Beneath the fascia, muscle is covered by a connective tissue sheath called epimysium.
- => In the muscle, the muscle fibers are arranged in various groups called bundles or fasciculi.
- =>Connective tissue sheath that covers each fasciculus is called perimysium.
- => Each muscle fiber is covered by a connective tissue layer called the endomysium.

#### **Muscle Fiber**

Muscle fibers are attached to a tough cord of connective tissue called tendon. Tendon is in turn attached to the bone.

=> Tendon of some muscle is thin flat and stretched but tough. Such type of tendon is called aponeurosis.

#### **SARCOMERE**

#### **Definition**

Sarcomere is defined as the structural and functional unit of a skeletal muscle. It is also called the basic contractile unit of the muscle.

## **Applied Aspect of Peshi and Muscle**

Acharya charak has also described 'Gurubhajanam Durvipakakaranam' Guru Ahara also leads Dusti of Mamsavaha srotas characterizes by general body swelling appearance of stable nodules, pricking pain and cracking of skin (ch vimon stana-5)

### 1. Paralysis (Pakhakhaat)

Loss of motor power in muscles is called paralysis. This cause inability of the muscles to contract. The root cause of paralysis can be of two types. Damage to motor neutral pathways Inherent disease of muscle.

## 2. Atrophy/ Marasmus and Hypertrophy/Stabdhagurisgtrata

Muscles which are not used for long times become thin and weak this is called disuse atrophy.

## 3. Myasthenia Gravis/ Mamsakshaya Evam Basakshay

Myasthenia gravis is an autoimmune disease of muscle of known origin.

#### **CONCLUSION**

According to modern Science, the basis for the nomenclature of muscle. Suggests the following parameters, shape, size, number of heads of origin, action, position, depth & location. These parameters described in Ayurved. Hence, it can be concluded that the basic concept for the study & classification of myology was given by Ayurveda. Appropriate muscular constitution is necessary for overall physical, immunological and endocrinal health of body. Mamsadhatu is synonyms with muscular tissue structure which is responsible for chesta and voluntary movements. Their function is prasaran (relaxation) and akunchan (contraction). Peshi also have contribution of raktavahasratas (capillaries) ligament and nerve fibers. Snayu, Peshi, Kandaras, etc., also pertain to muscle. In Ayurveda concept whatever disease found in Peshi, these all are as muscle disease. So here we can say that the concept of peshi sharir in Ayurveda can be corelated with modern concept of muscle.

### REFERENCE

- 1. रचना शारीर (Dr. Sushil Dwivedi)
- 2. शरीर क्रिया विज्ञान (डॉ॰ सुनील वर्मा, प्रो॰ जयराम यादव)
- 3. Medical physiology (K Sembuligam, Prema Sembuligam)
- 4. Article A Cadaveric study on myology with special reference to peshi Swaroop by Dr. Sandeep Kashyap, Dr. Abhijit Patil, Dr. Ajit Kumar Wahane.
- 5. Article Detail study of Peshi Sharir & Applied anatomy of peshi by Dr. Pooja Tiwari and Dr. Dinesh Choudhari.
- 6. Article Understanding the 'PESHI' on the basis of literary and Cadaveric by Dr. Vikash, Dr. Sakshi and Dr. Subash Upadhyay.
- 7. Tortora's principles of Anatomy and Physiology.