

# DEFENSE THERAPY<sup>®</sup>

Physical Therapy for Everyone

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# Targeted Audience

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ALL OF US THAT ARE INTERESTED IN  
FEELING STRONGER AND HEALTHIER  
BY TAKING CARE OF OUR OWN BODY

\*NON MEDICAL PROFESSIONALS

# Objectives

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- Learn about our body
- Learn about the stress to our body
- Learn about the response to stress
- Learn about how we heal ourselves

# Objectives (NOT)

- Become a physiologist



- Become a medical professional

- Become a personal trainer

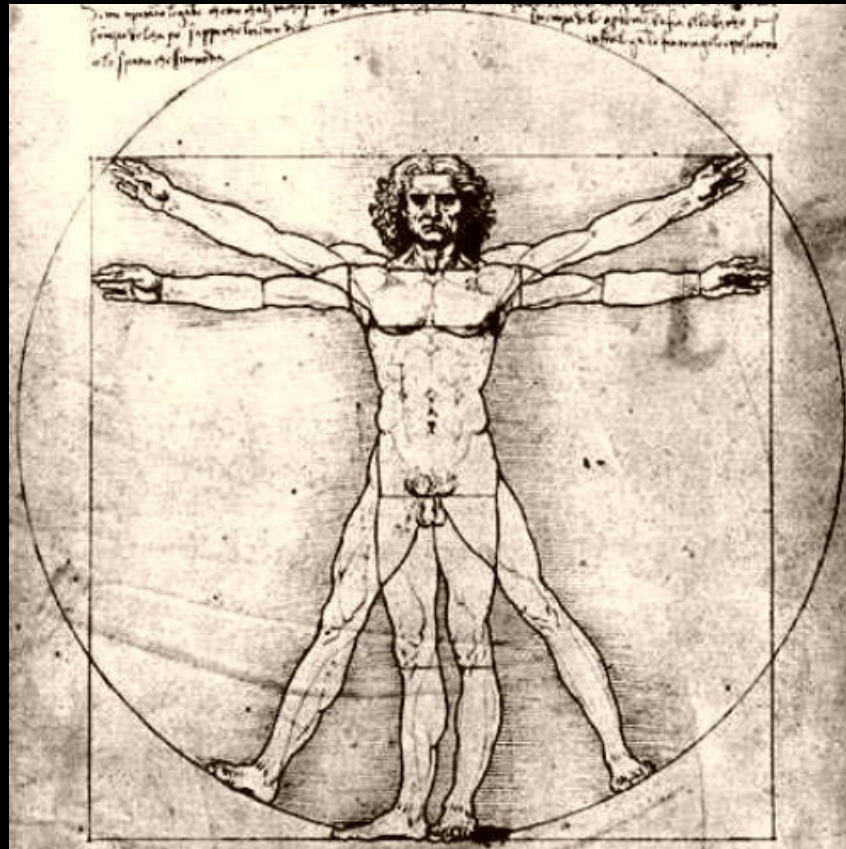


- Become a kung fu artist



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# The Body



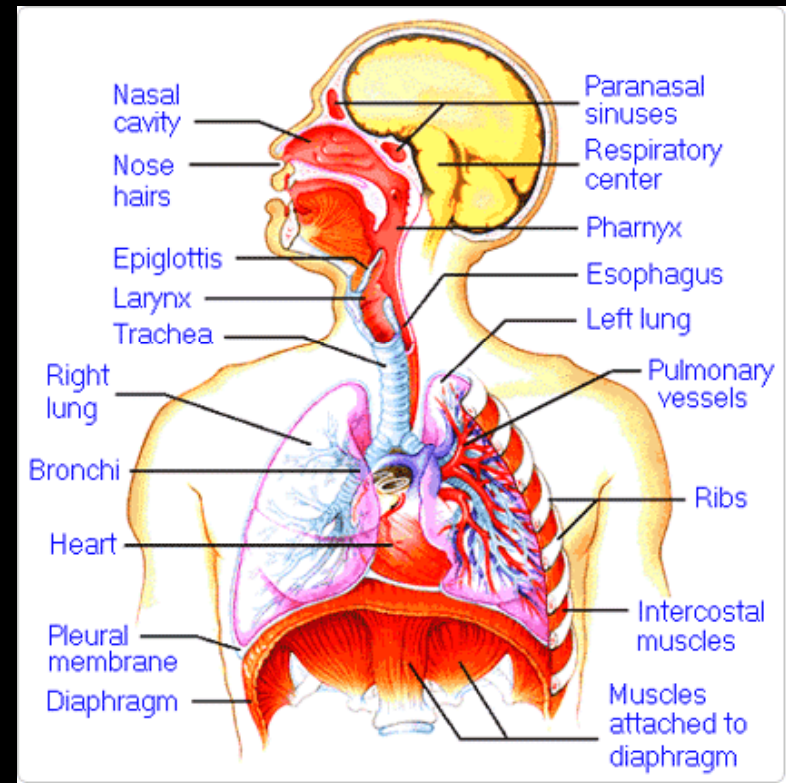
# The Body: Systems

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- Circulatory
- Connective Tissues
- Digestive
- Endocrine
- Integumentary
- Muscular
- Nervous (Senses)
- Reproductive
- Respiratory
- Urinary

# Respiratory system

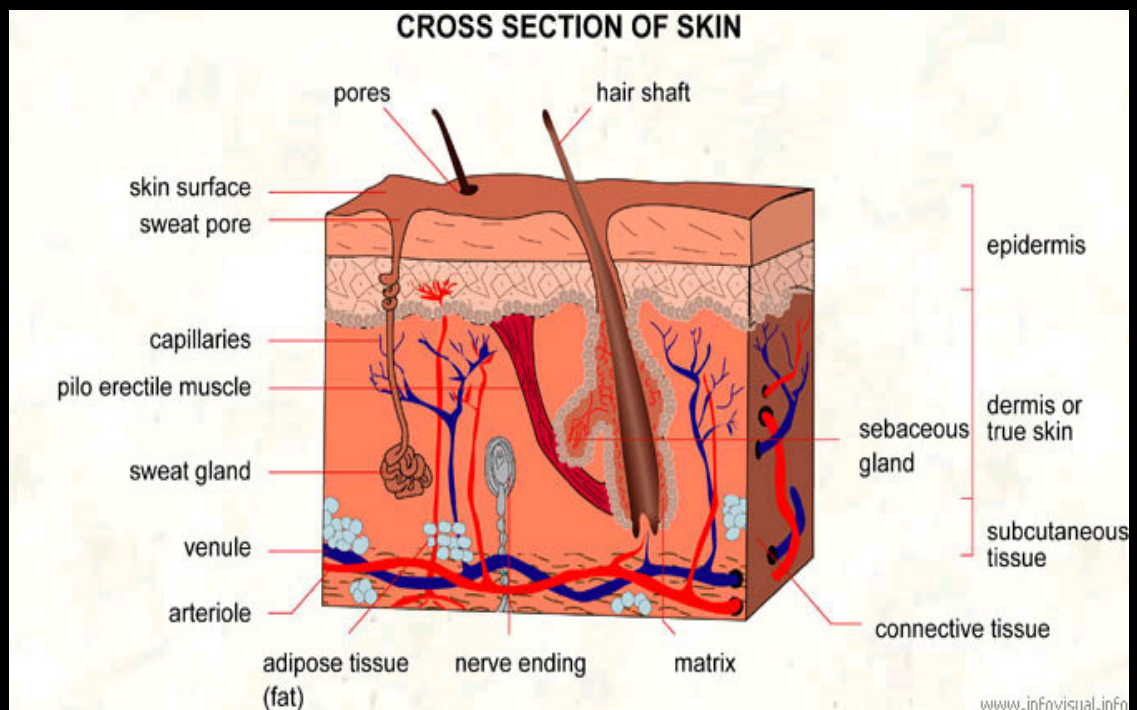
- Upper airway:
  - Nose
  - Nasal cavity (Sinuses)
  - Pharynx (Throat)
  
- Lower airway:
  - Larynx
  - Trachea (Windpipe, trachealis)
  - Bronchi
  - Bronchioles
  - Lung (alveoli)



[http://www.medem.com/MEDEM/images/AMA/ama\\_id\\_respiratoryinfections\\_lev20\\_respiratorysystemstructuredetail\\_01.gif](http://www.medem.com/MEDEM/images/AMA/ama_id_respiratoryinfections_lev20_respiratorysystemstructuredetail_01.gif)

# Integumentary System

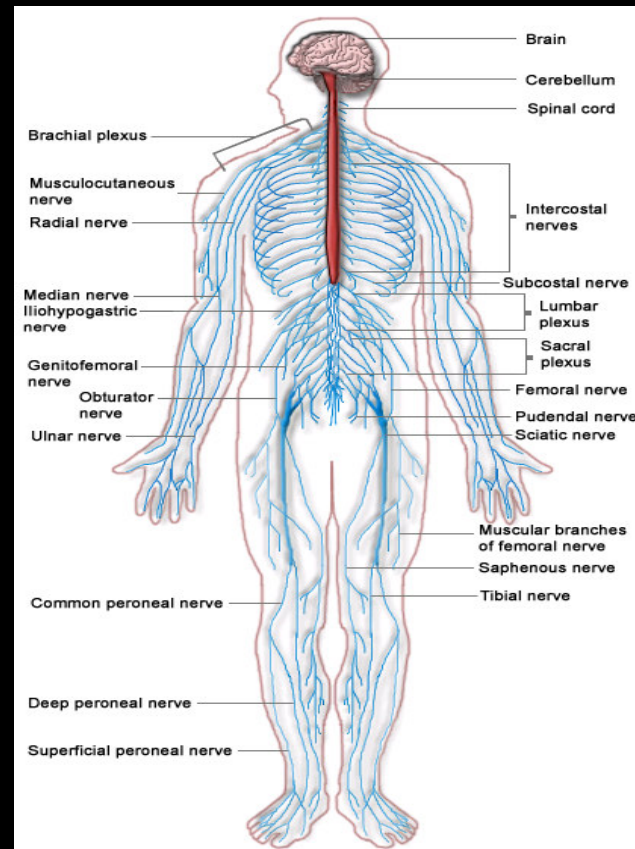
- Epidermis
- Dermis
- Glands
  - Sudoriferous (sweat)
  - Sebaceous (oily)
- Hairs
- Nails



[http://www.infovisual.info/03/img\\_en/036%20Cross%20section%20of%20skin.jpg](http://www.infovisual.info/03/img_en/036%20Cross%20section%20of%20skin.jpg)

# Nervous system

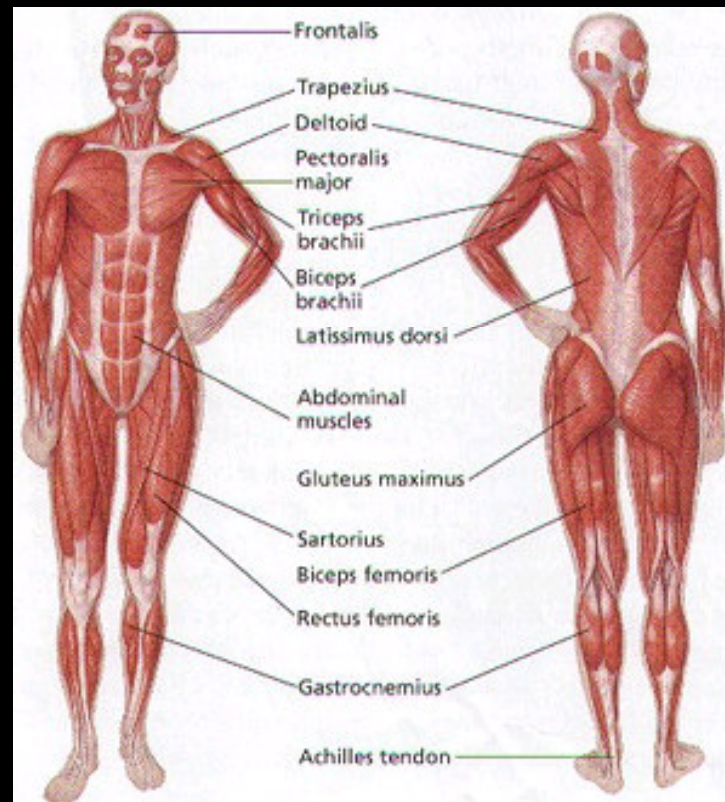
- Central system
  - Brain-*cerebrum & cerebellum*
  - Spinal cord
- Peripheral system
  - Cranial nerves-12 pairs
  - Spinal nerves-31 pairs
- Motor nerves
- Sensory nerves
- Autonomic system:
  - Sympathetic
  - Parasympathetic



[http://content.answers.com/main/content/wp/en/b/ba/Nervous\\_system\\_diagram.png](http://content.answers.com/main/content/wp/en/b/ba/Nervous_system_diagram.png)

# Muscular system

- Involuntary:
  - Cardiac
  - Smooth
- Voluntary:
  - skeletal
- Atrophy
- Hypertrophy
- Length-Tension relationship



<http://www.drstandley.com/images/muscular.bmp>

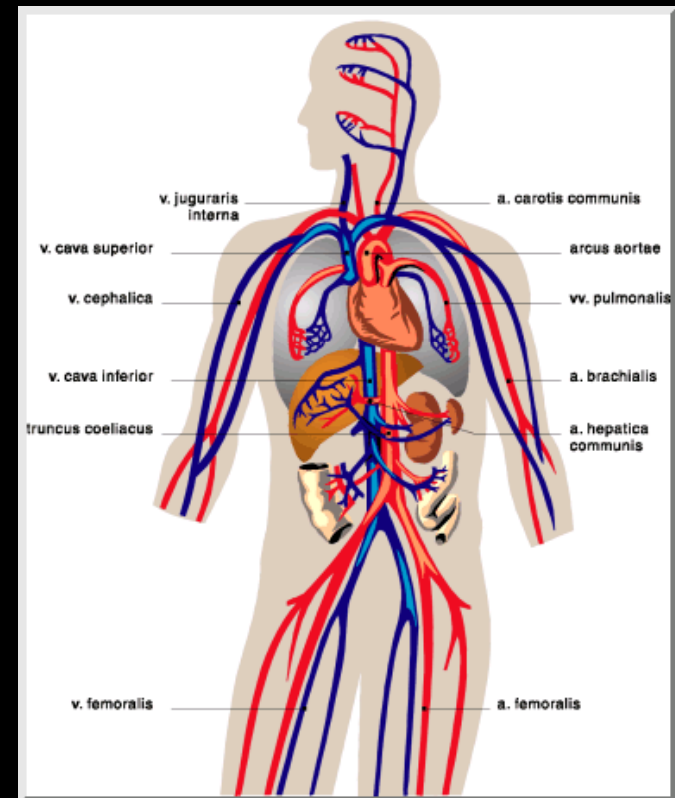
# Circulatory system

## ■ Blood / Vascular:

- Heart
- Vessels
  - Artery
  - Vein
  - Capillary
- Transport:
  - Fluid
  - Gases
  - Nutrition
  - metabolites

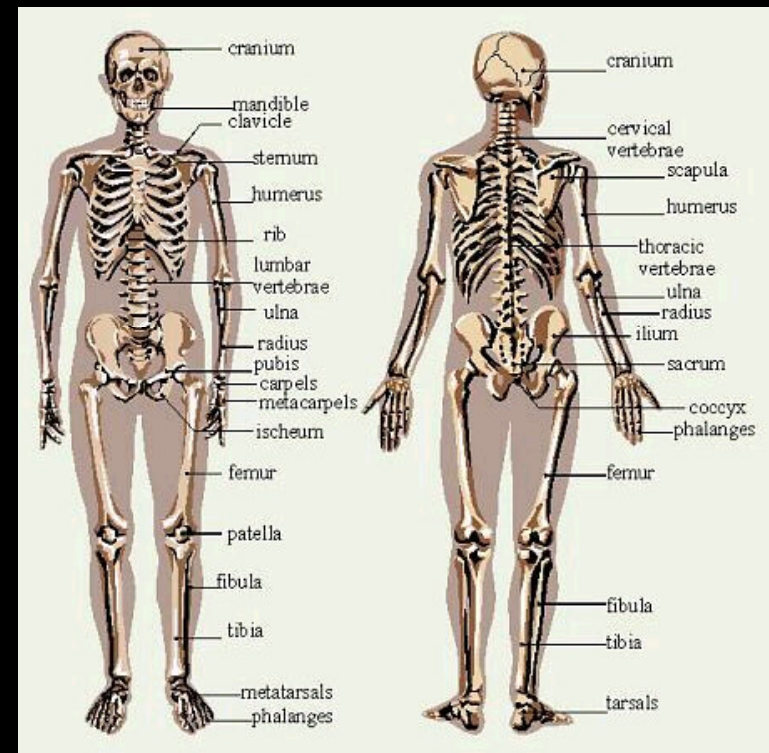
## ■ Lymphatics

- Lymphatic capillaries
- Lymph nodes
- Transport:
  - Fluids
  - Proteins
  - Waste
  - metastasis



# Connective Tissues

- Bone
  - Joints
- Cartilage
  - \*Non Healing
- Fibrous tissue:
  - Ligaments
  - Tendons
- Elastic tissue:
  - Artery wall
- Adipose tissue:
  - Fatty layers
- Fascia
- Teeth



<http://biology.clc.uc.edu/graphics/bio105/skeleton.jpg>

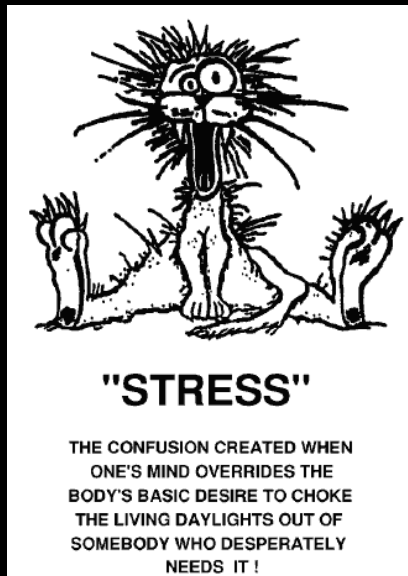
# II-Stress to the Body

## ■ Biologic

- Bacterial
- Fungal
- Viral
- Autogenic

## ■ Chemical

- Contact
- Airborne
- Food-borne



## ■ Emotional

- Fear
- Anxiety
- Anger
- Depression

## ■ Physical

- Weight
- Trauma

## III- Response to Stress

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- Infection
- Inflammation
- Contusion / Bruise
- Skin wound and lesions
- Sprain / Rupture / Avulsion
- Strain / Tear
- Pain- (acute vs. chronic)

# IV-Common Ailments (Neck)

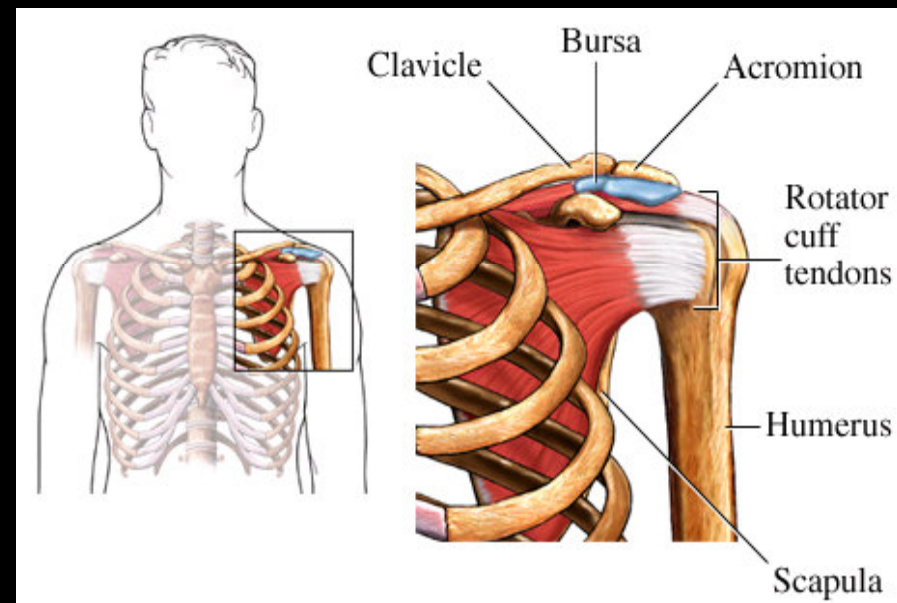
- Strain
- Sprain
- Postural Dysfunction
- Disc Bulge
- Slipped/ Herniated Disc
- Spur / Arthritis



■ [http://www.gehealthcare.com/user/ct/case\\_studies/images/zxi\\_neck\\_vr1.jpg](http://www.gehealthcare.com/user/ct/case_studies/images/zxi_neck_vr1.jpg)

## IV-Common Ailments (Shoulder)

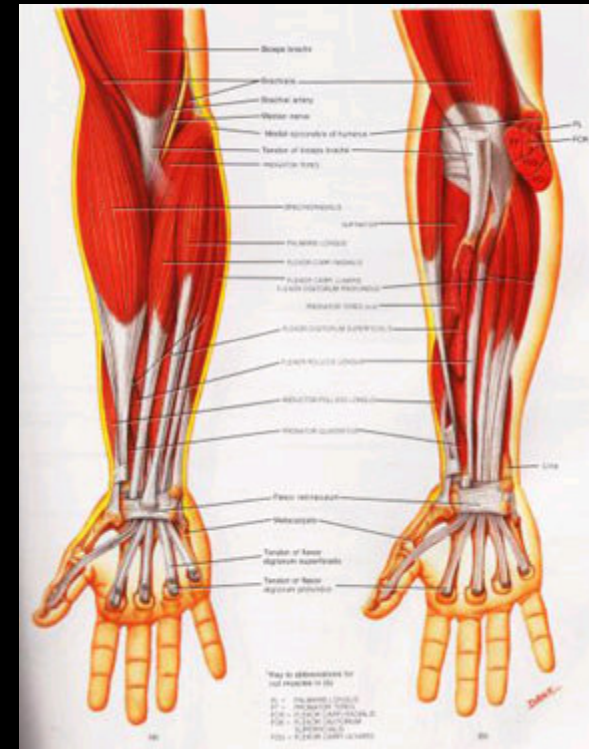
- Strain
- Sprain
- Bursitis
- Tendonitis / Tendinosis
- Subluxation/Dislocation
- Arthritis
- Impingement
- Rotator Cuff Tear
- Frozen shoulder



<http://health.yahoo.com/media/healthwise/h5551418.jpg>

## IV-Common Ailments (Elbow / Wrist / Hand)

- Tennis Elbow
- Golfer's Elbow
- Carpal Tunnel Syndrome
- De Quverain Syndrome
- Arthritis / Rheumatoid
- Jammed fingers
- Trigger fingers



<http://www.tailored-fitness-home-workouts.com/images/elbow%20muscle%20group.jpg>

## IV-Common Ailments (Lower Back)

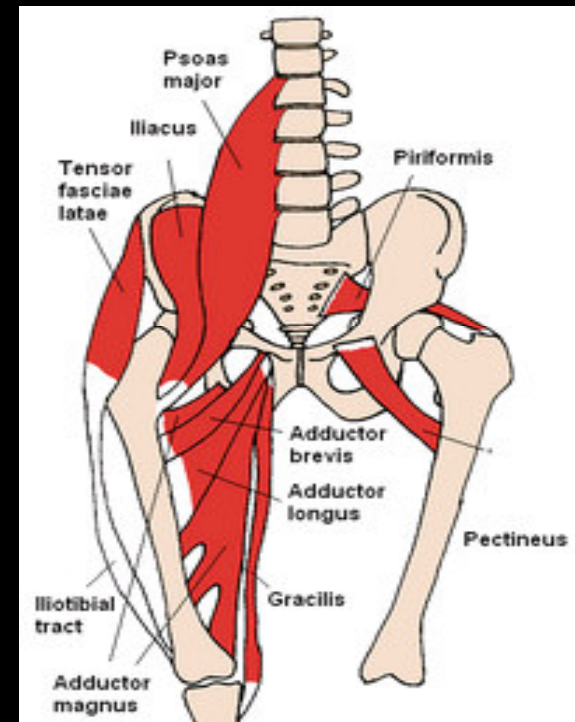
- Sprain
- Strain
- Postural Dysfunction
- Arthritis / osteophytes / Spur
- Spinal Stenosis
- Disc Bulge
- Disc Herniation
- Compression Fracture



<http://www.wevegotyourback.org/images/lowbackmuscles.jpg>

## IV-Common Ailments (Hip)

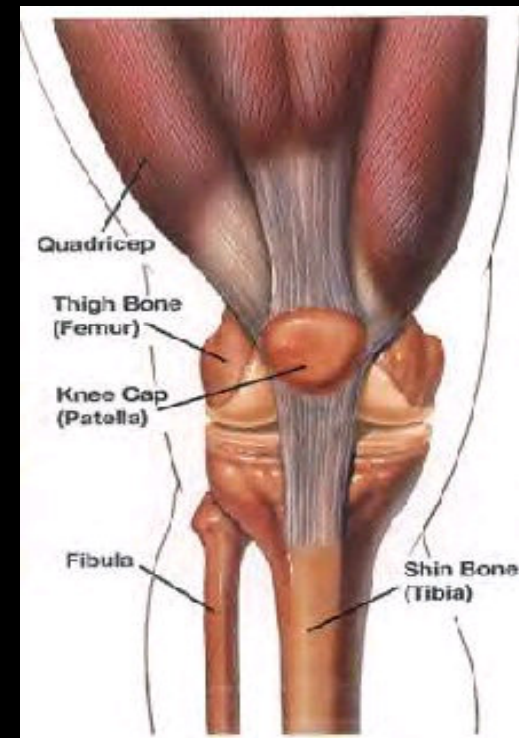
- Sprain
- Strain
- Bursitis
- Arthritis
- Piriformis Syndrome
- Sciatica
- Postural Dysfunction



[http://content.answers.com/main/content/wp/en-commons/thumb/0/06/200px-Anterior\\_Hip\\_Muscles\\_2.PNG](http://content.answers.com/main/content/wp/en-commons/thumb/0/06/200px-Anterior_Hip_Muscles_2.PNG)

## IV-Common Ailments (Knee)

- Arthritis
- Sprain
- ACL / Collateral Ligament Tear
- Meniscus Tear
- Chondromalacia  
(Runner's Knee)



<http://members.aol.com/dcaronejr/ezmed/knee.jpg>

## IV-Common Ailments (Ankle / Foot)

- Ankle sprain
- Heel Spur
- Planter Fasciitis
- Achilles' tendonitis
- Arthritis
- Dislocation
- Diabetic neuropathy
- Pes Planus (flat foot)
- Pes Cavus (high arch)
- Hammer Toes
- Corns / Warts



[http://www.abcbodybuilding.com/magazine03/foot\\_files/ankle.png](http://www.abcbodybuilding.com/magazine03/foot_files/ankle.png)

# V-Healing: *Defense Therapy*

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Anti-Inflammatory

Pro-Inflammatory

Analgesics

Pro-Metabolism

Reconditioning

# V-Healing: *Defense Therapy*

- Anti-inflammatory:

- **P**rotect

- **R**est

- **I**ce

- **C**ompression

- **E**levation

# V-Healing: *Defense Therapy*

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## ■ Pro-inflammatory:

- Hot pack
- Warm compress
- Massage
- Liniment
- Hydrotherapy

# V-Healing: *Defense Therapy*

## ■ Analgesics:

- Hot pack
- Ice pack
- Massage/Acupressure
- ROM
- Stretch
- Movement Science

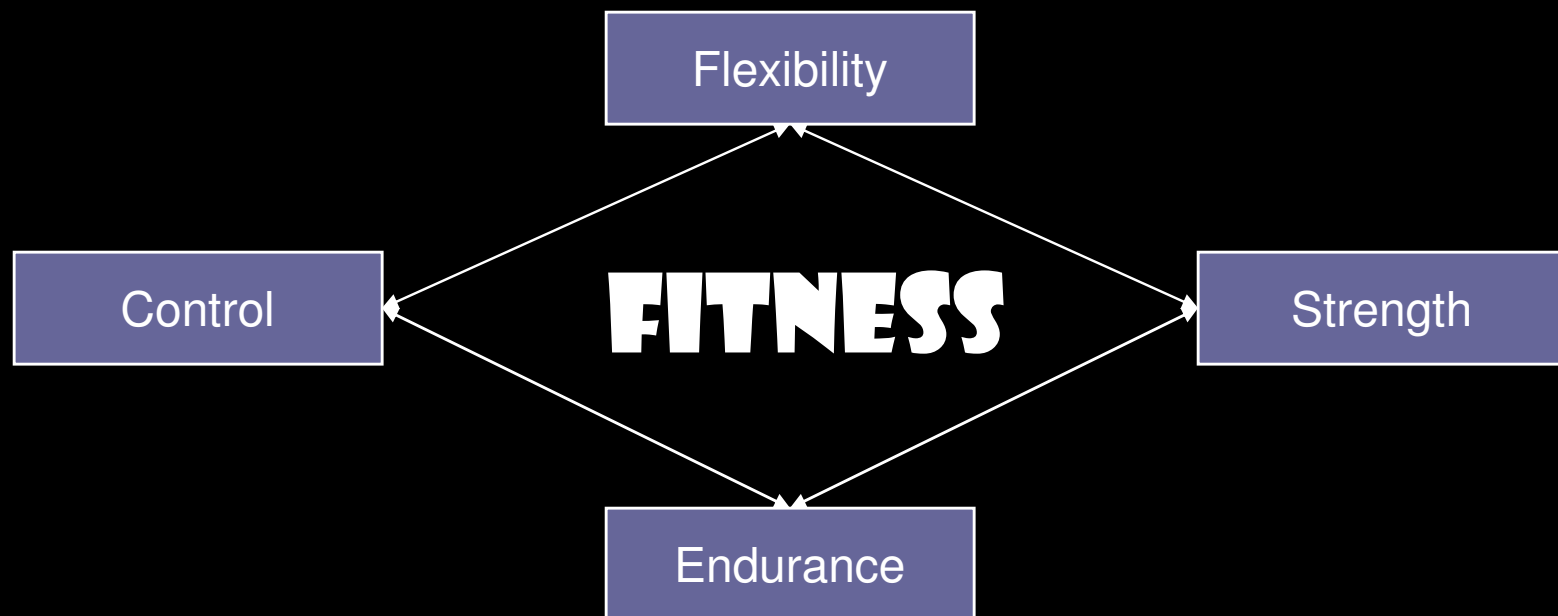
# V-Healing: *Defense Therapy*

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- Pro-metabolism:
  - Hot/Cold Contrast
  - Massage
  - Hydrotherapy
  - Exercises

# V-Healing: *Defense Therapy*

- Re-conditioning: *(Self-Perfection & Self Preservation)*



# V-Healing: *Defense Therapy*

## ■ Re-conditioning: *Lets try a small sample....*

- Monitor your progress: Vital signs: (H/R, R/R, B/P)  
Exercise log

Total Fitness

- Endurance- (Cardio: UE & LE)
- Flexibility- (neck, UE, trunk, LE)
- Strength- ( Abds, shoulders, legs)
- Control- (Balance: abc's)

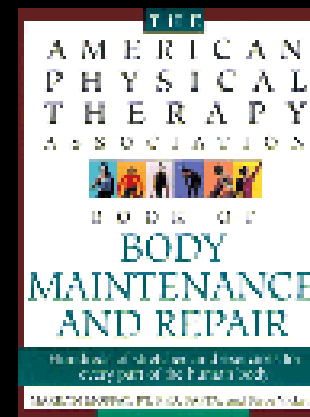
# VI-Closing Thoughts

- Body repair relies on consist common sense: Rest, Clean Air, Proper nutrition, moderation, and Healthy living habits.
- There is no substitute for EXPERT opinion. Seek proper health care professional evaluation and management.
- Be “in-tune” with your own body &  
Maintain a positive mental attitude
- Believe in *PREVENTION* ----- “*The Best Defense is Don't Be There*”

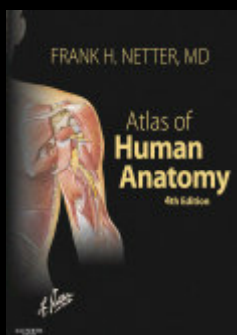
Kung Fu Motto

# References

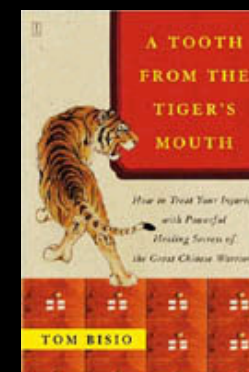
## Body Maintenance and Repair, APTA



## Netter's Atlas of Human Anatomy



## A Tooth From the Tiger



## APTA | What is Physical Therapy



# THANK YOU

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