

응용근신경학(AK, Applied Kinesiology)이라?

- 응용근신경학은 근육의 반응을 매개로 하여 인체의 건강 3요소 즉 구조, 화학, 정신적인 면을 모두 검사하고 치료하는 전인적인 의학으로 카이로프랙틱을 비롯한 수기치료법, 두개골 치료법, 침구경락, 임상영양학, 기능의학(functional medicine), 운동치료법, 족부의학, 자연치료법(Naturopathy), 임상심리학 등을 유기적으로 통합하여 양방, 한방 그리고 대체의학의 통합적인 패러다임을 제시하고 있다

Dr. Goodheart

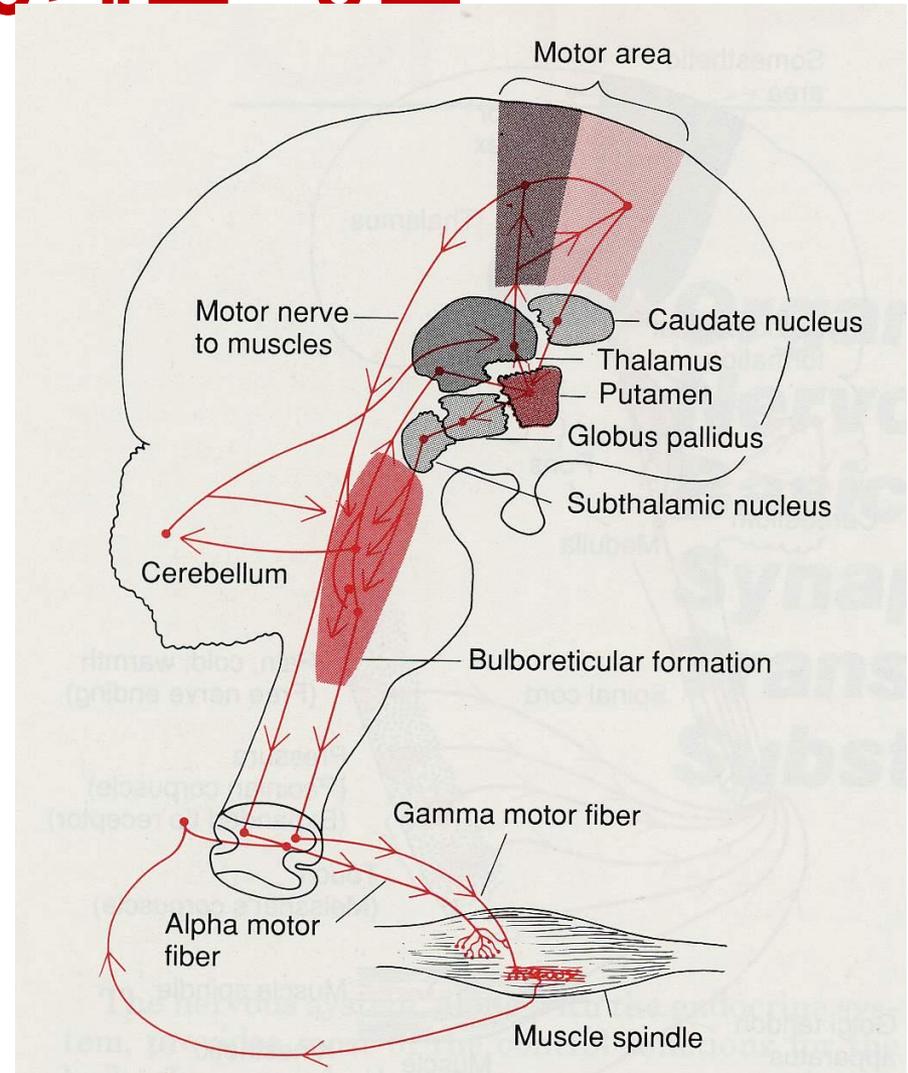


근육검사

- 근육과 장기와의 관계
- 진단용으로 사용하는 지표근육 indicator
- 지표근육의 조건: 약하거나(inhibition), 강하지(facilitation) 않아야 한다.

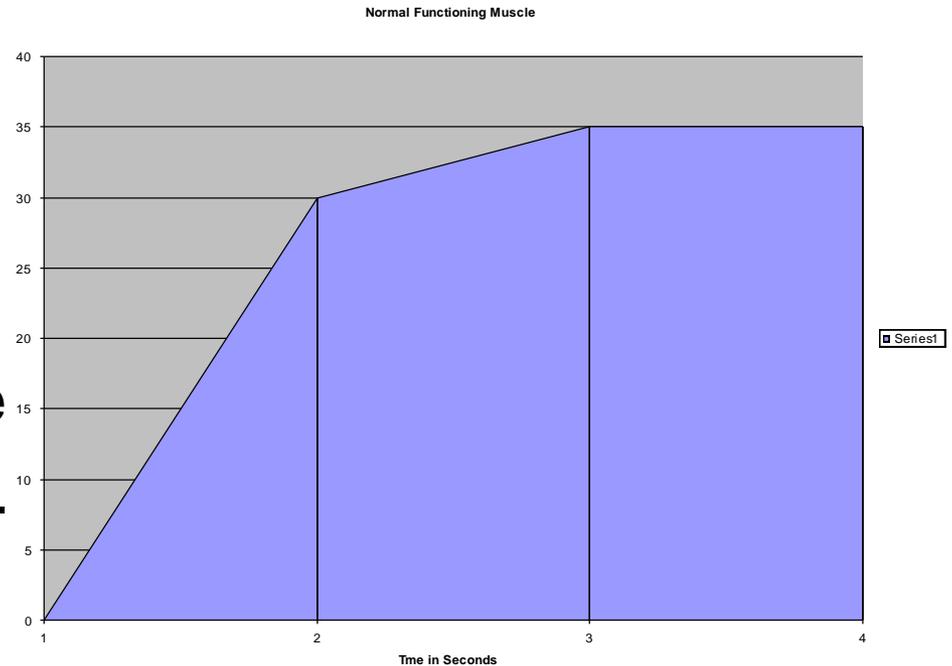
근육은 신경계의 창문

근육은 뇌의 역동적
인 변화를 대변한다



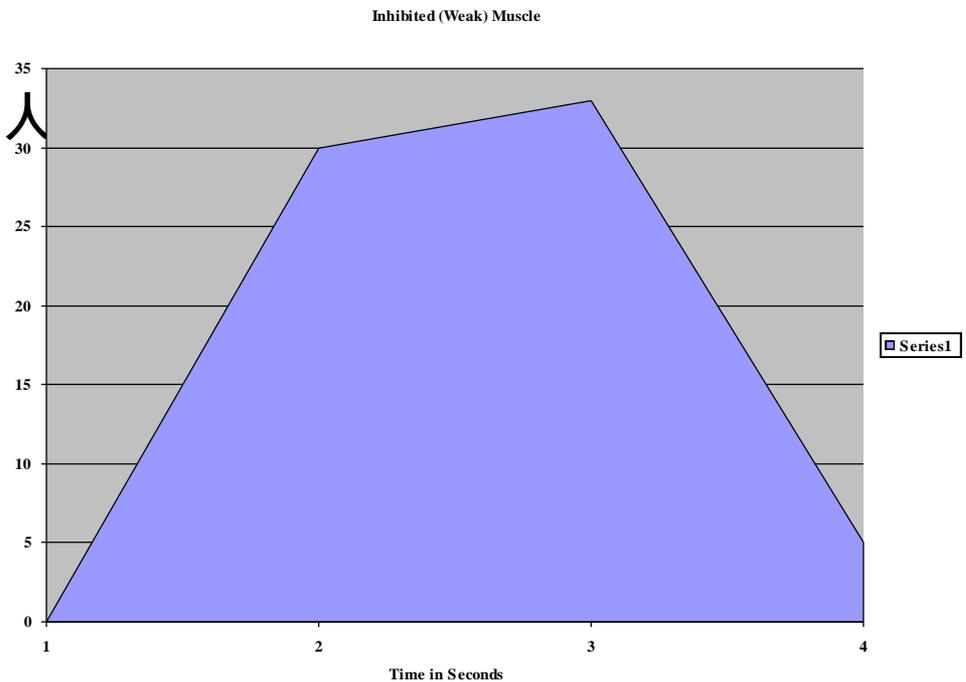
정상 근육(Normal Test)

- 환자가 검사자가 가하는 힘에 저항한다 Patient applies pressure against tester
- 검사자는 더 힘을 가한다. Tester increases force
- 환자는 그 힘에 적응한다. Patient is able to adapt



약한 근육

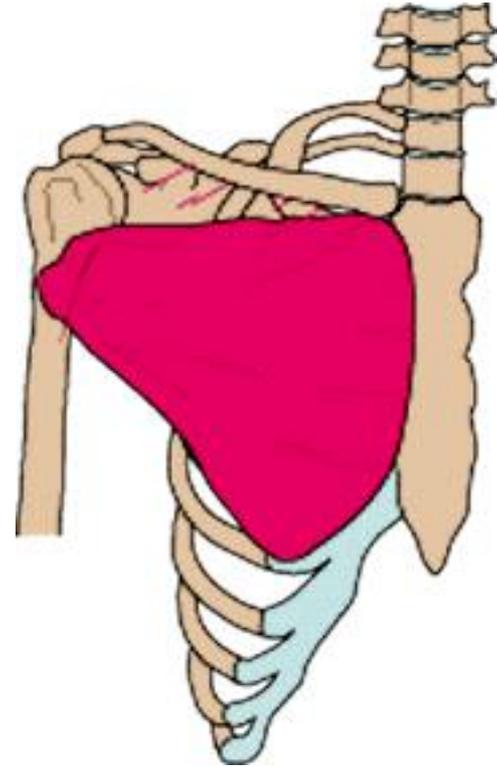
- 환자는 검사자가 가하는 힘에 저항한다.
- 검사자는 힘을 증가시킨다.
- 환자는 적응할 수 없다.



- Muscle testing is an important tool in the decision making process of what to do for a patient than confronted with a number of different alternatives.
- 근육검사는 여러가지 가능성을 앞에 두고 무엇이 문제인지 혹은 어떤 것을 해야 하는지를 알려주는 중요한 도구다.
- -Walter Schmitt Jr. -

큰가슴근 복장뼈분지, 대흉근 흉골지의 기능 PMS (Pectoralis Major Sternal Division)

- 상완골의 굴곡
- 약할 때 능형근의 긴장
 - 물건을 던질 때 문제가 생길 수 있다
- 전신의 독소, 해독의 문제





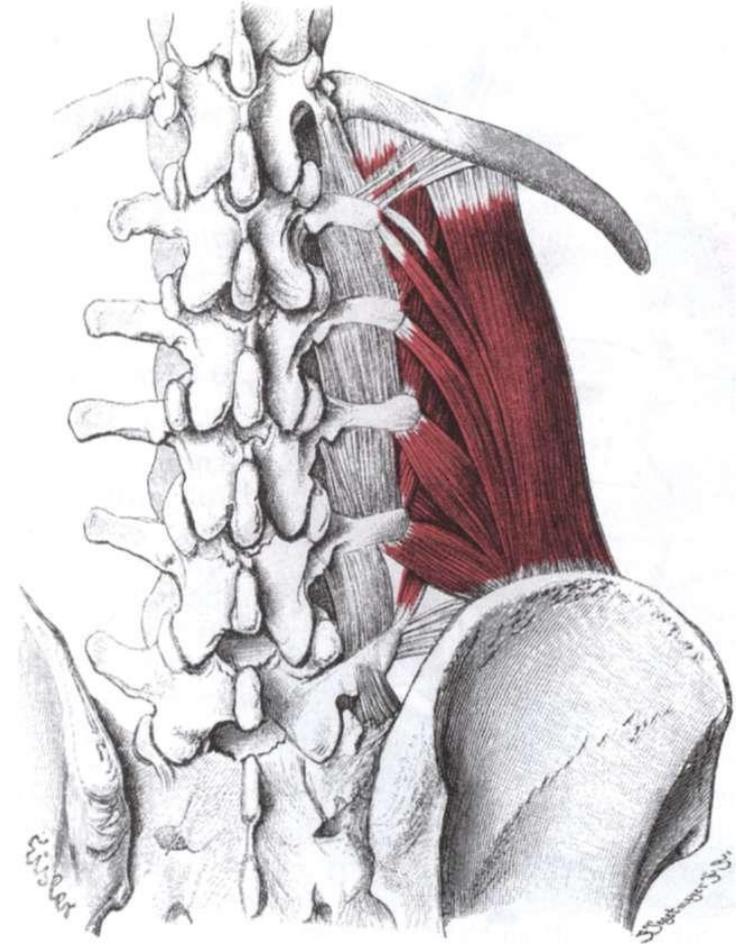
궁둥구멍근, 이상근의 기능 Piriformis



- 고관절 외회전근
- 약할 때 임상적인 의의
 - 천골의 아탈구
 - 목의 통증과 관련
 - 대전자 주위의 통증



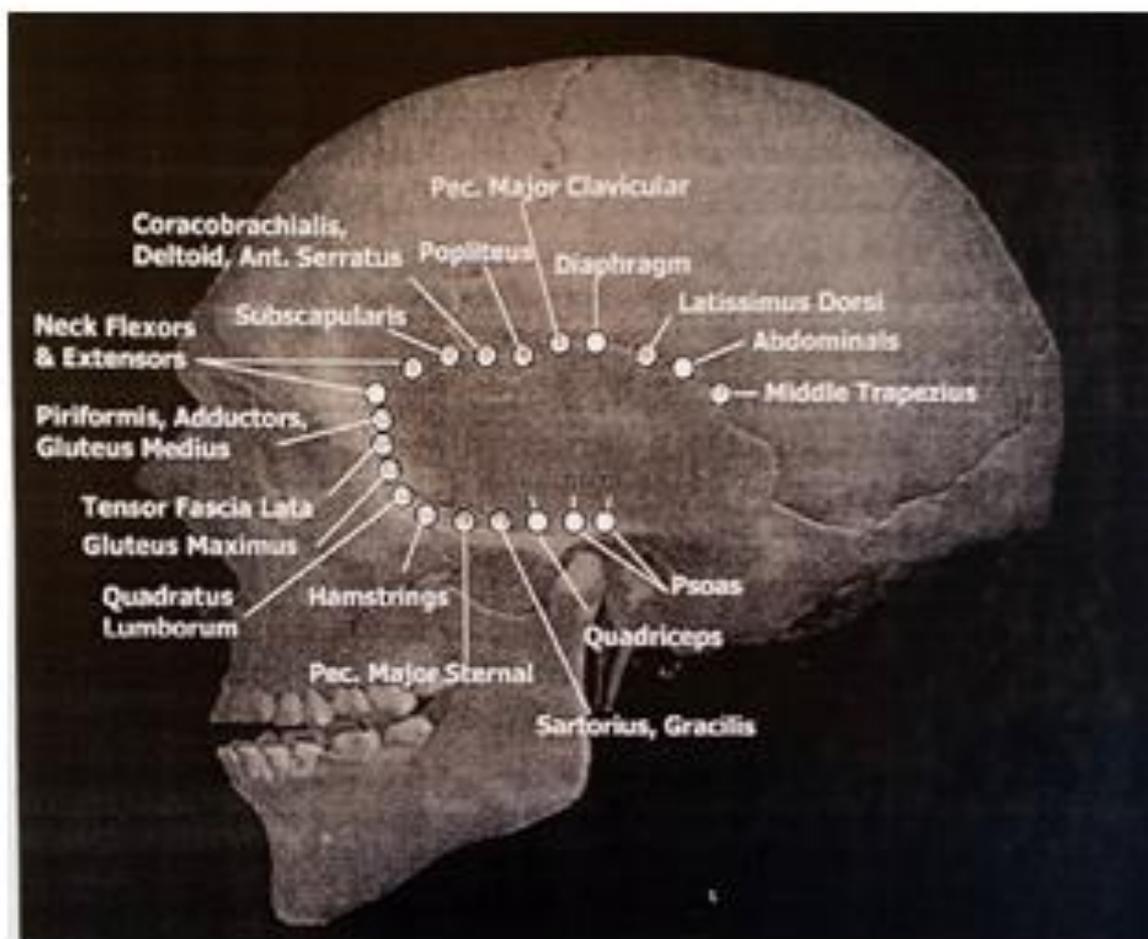
Quadratus Lumborum



다양한 근육반응

- 횡격막과 氣의 흐름
- 보행과 허리 근육
- 보행과 턱관절
- 부신
- Craniosacral fault 두개천골기능이상
- Vial 맞지 않는 음식 혹은 chemical offender

근육-장기 상관관계 (Muscle-Organ relationship)

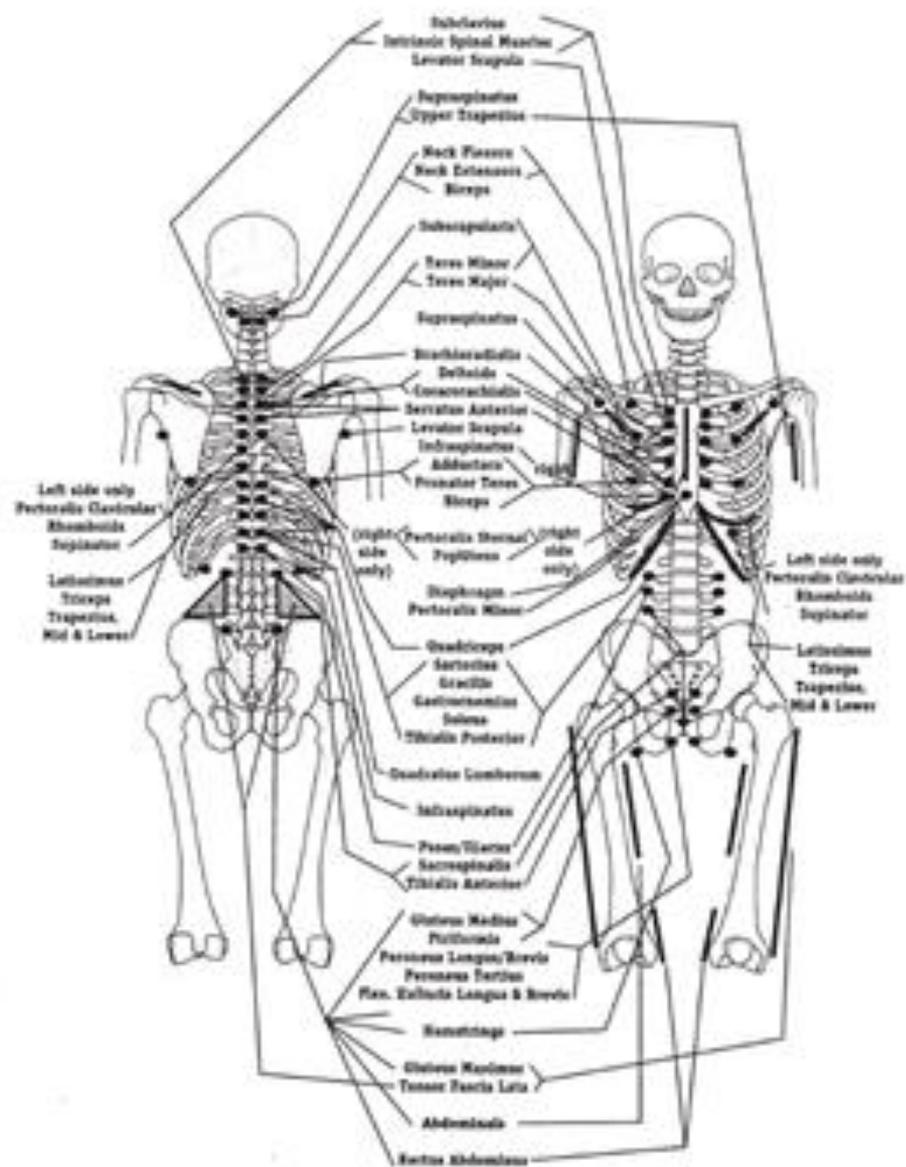


Muscle-Organ relationship

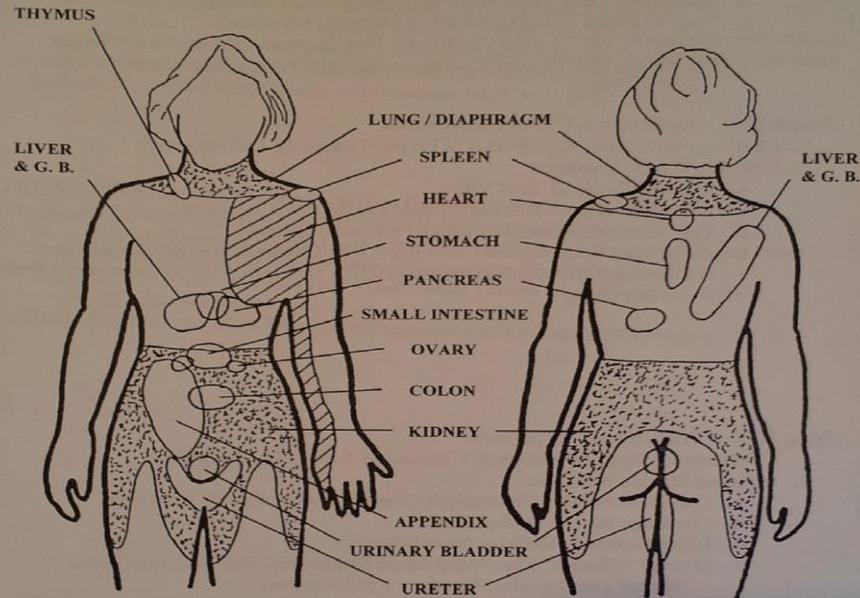
- 간(Liver)-대흉근 흉골지(PMS), 능형근
- 담낭(Gall bladder)-슬와근
- 위(Stomach)-대흉근 쇄골지(PMC), 이두근, 상완근, 상완요근, 방형회내근, 원회내근, 회외근, 모/소지 대립근
- 췌장(Pancreas)-광배근, 삼각근
- 비장(Spleen)-중/하부 승모근
- 생식기(Sex organ)-이상근, 대둔근, 중둔근, 소둔근
 - 폐경기: 내전근
- 대장(Large intestine)-TFL
 - 충수: 요방형근 / 직장: hamstring
- 소장(Small intestine): 복근군, 대퇴사두근

Muscle-Organ relationship

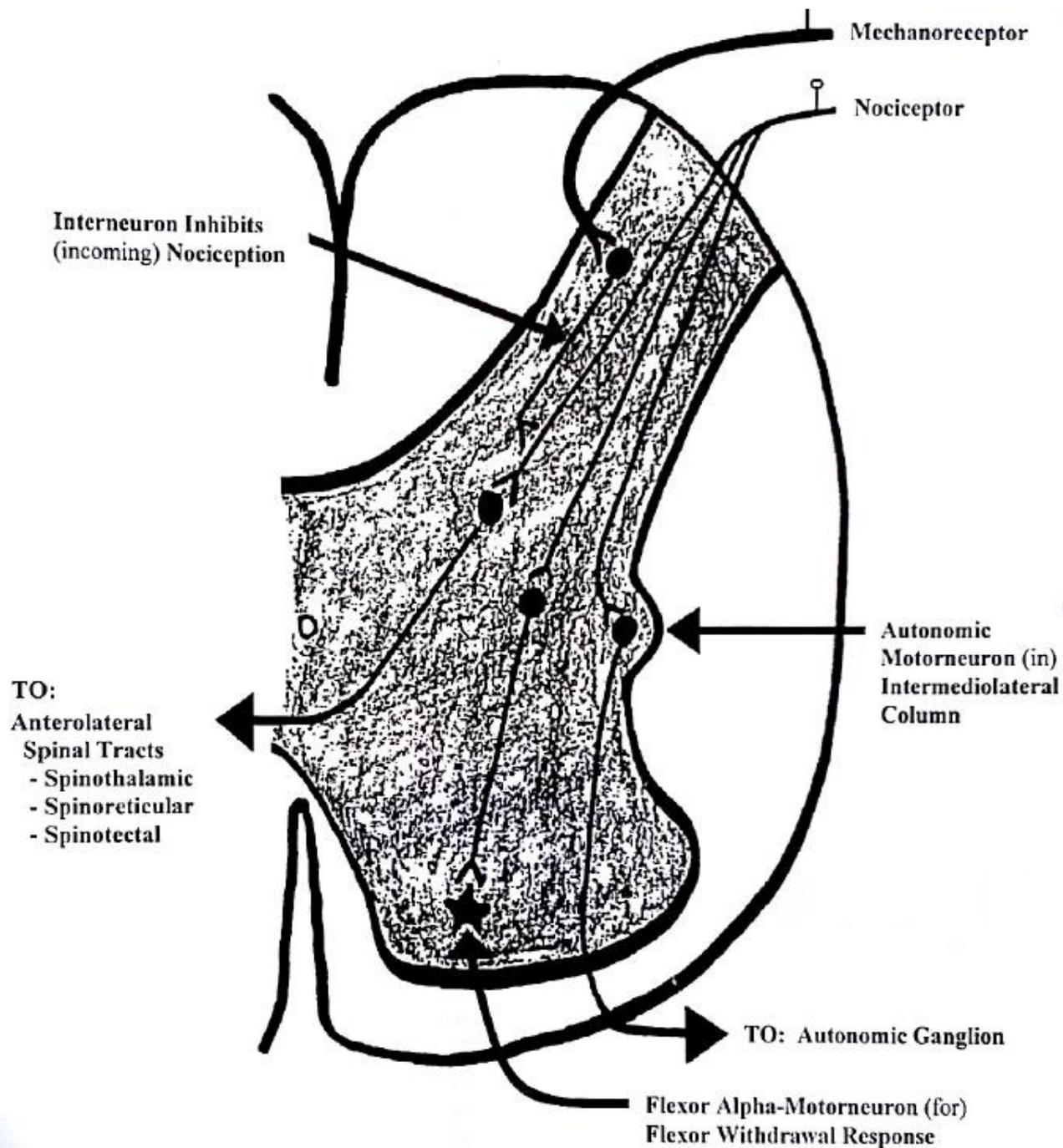
- 부신(adrenal)-봉공근(medullar), 박근(cortex), 가자미근, 비복근, 후경골근
- 방광(Bladder)-전경골근, 장/단비골근, 제3비골근, 척추기립근
- 폐(Lung)-전거근, 삼각근, 오혜완근, 견갑거근
- 심장(Heart)-견갑하근
- 흉선(Thymus)-극하근
- 뇌(Brain)-극상근
- 갑상선(Thymus)-소원근
- 신장(Kidney)-장요근, 요근
- 눈, 귀(Eye/ear)-상부승모근
- 부비동(Sinus)-SCM



VISCERAL REFERRED PAIN (VRP) AREAS



Mechanoreceptor Activation (Rubbing) and Nociceptor Activation (Pinching) May Be Used as Sensory Receptor Challenges to VRP Areas. Muscle Testing Outcomes in Response to these Challenges Suggest the Relative Sympathetic-Parasympathetic Status of the Related Organ.



VRP challenge

- VRP(visceral replex pain area) challenge
 - Rubbing(부교감신경 자극)/pintching(교감신경 자극)
- 약한 (장기 관련) 근육이
 - VRP rubbing 후 강해지면->NL point rubbing
 - VRP Pintching 후 강해지면->NL point IRT

AK Manipulation

기존의 manipulation과 AK muscle guided manipulation의 다른점

- 기존의 manipulation은 시술자의 physical exam에 의존->physical exam.의 숙련도에 따라 치료 segment가 달라질 수 있다.
- Muscle test guided manipulation은 환자의 상태에 최적화된, 교정해야 할 segment를 초심자도 쉽게 찾을 수 있다.

AK의학만의 독창적 우월성

- 기존에 존재하는 의학(정통의학, 기능의학, 신경학, 영양학, 경락체계, 정골요법, 동종요법, 기타의학)을 모두 AK muscle test와 창의적, 창조적 융합이 가능하다

-----> 개별환자의 여러 특성에 따른 차이나 치료과정에서 환자상태의 변화를 실시간 치료에 적극 반영하여 능동적인 조율이 가능하다

AK 도수치료 분야

- 두개골과 천골
- TMJ
- 척추와 골반
- 사지 발
- 횡격막

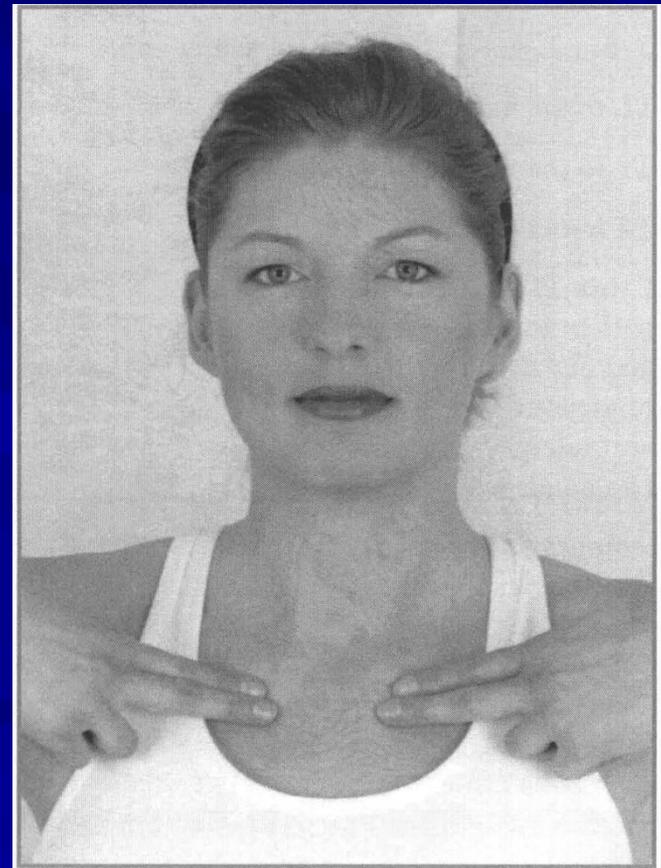
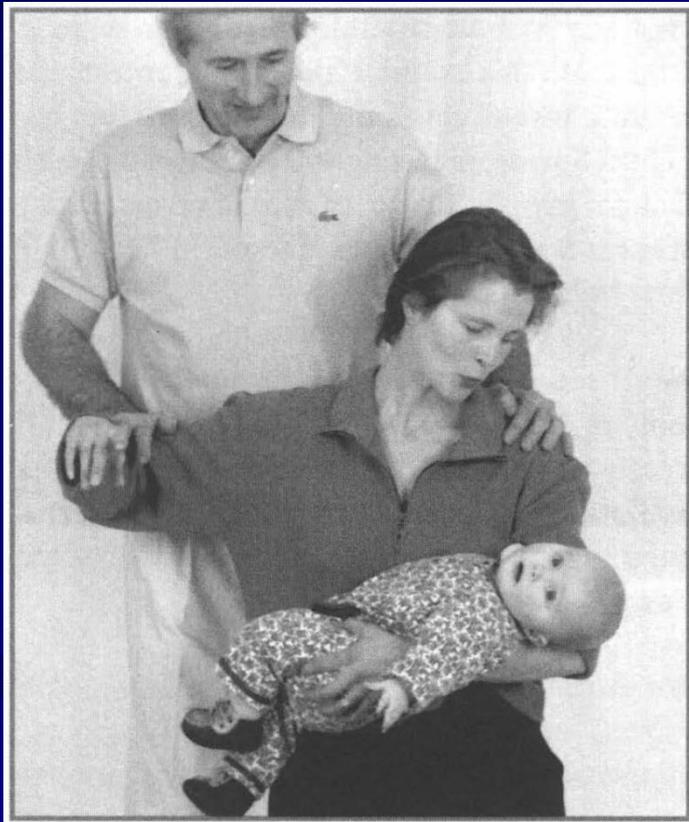
Muscle guide manipulation

- Psoas – Occiput
- Abdominalis – Sagittal suture
- Piriformis – Sacrum
- Gracilis, Sartorius – PI
- G-max, Hamstring – AS
- G-medius, Abdominal Oblique – Ex, In
- Neck extensors – Sacral/Lumbar Fixation

- Appropriate Indicator muscle

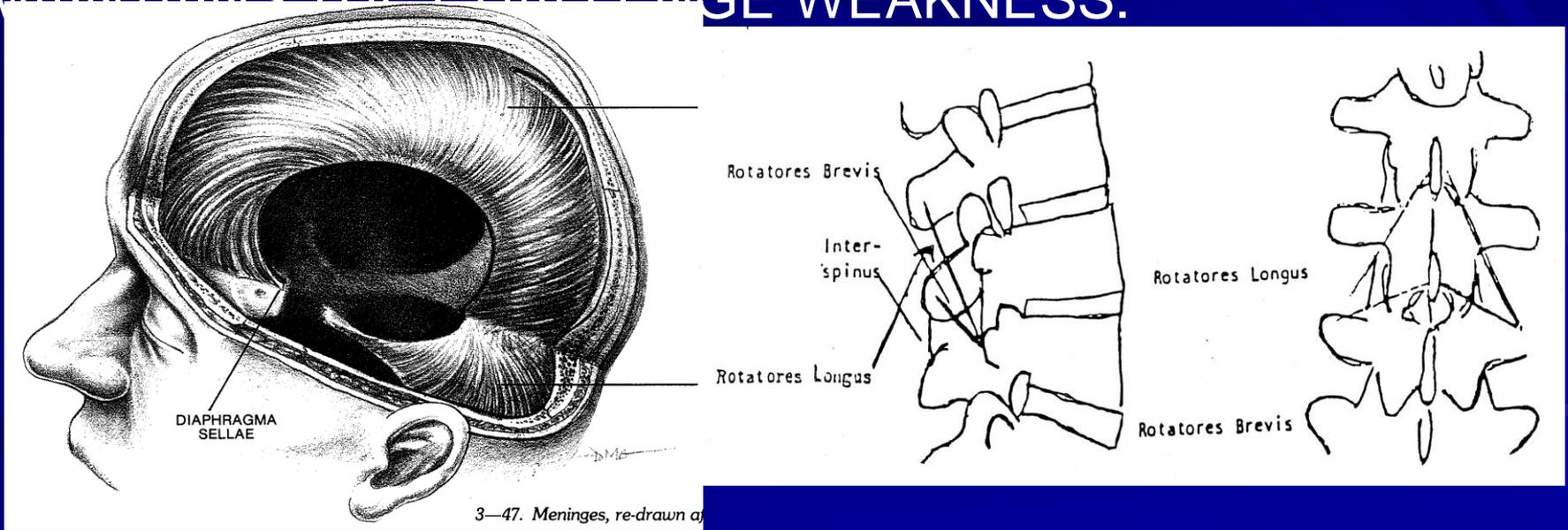
Therapy Localization (TL)

Therapy localization does not tell us what is wrong, just where **something is wrong**



Vertebral challenge

- ALWAYS ADJUST IN THE DIRECTION THAT CHALLENGING (PUSHING AND RELEASING) CAUSES WEAKNESS.
- ADJUST WITH SPINE IN THE POSITION THAT MAINTAINS THE CHALLENGE WEAKNESS.



Extremity Challenge

ALWAYS ADJUST

Upper Limb Pain

In **Bilateral Upper Limb Pain** Consider that the Source of the Problem May Be **Hyperinsulinism** and/or **Mesencephalic Dysfunction** (i.e. Switching, TMJ, Cranial, Immune Dysfunction). Also Consider that the Pain May Be Related to Any Other Systemic Dysfunction.

Biceps Tendon Slip

1. Hold Elbow & Contact **Bicipital Tendon Medial to Lateral** With Thumb.
2. **Maintain Pressure.**
3. **Move Humerus Into Extension, Abduction & Medial Rotation, then Anterior & Back to Starting Position.**

IN THE

DIRECTION

Shock Absorber Test

Strike Sole of Foot With Hand If Strong Muscle Weakens: Foot/Ankle Subluxation

NOTE: Similar Procedure Can Be Applied to Any Diarthrodial Joint

Foot Subluxations

Associated Weak Muscles

Lateral Talus	Psoas
Lateral Cuboid	TFL
Dropped Navicular	Adductor

OF

STRENGTH

Flexor Reflex Afferent (FRA)

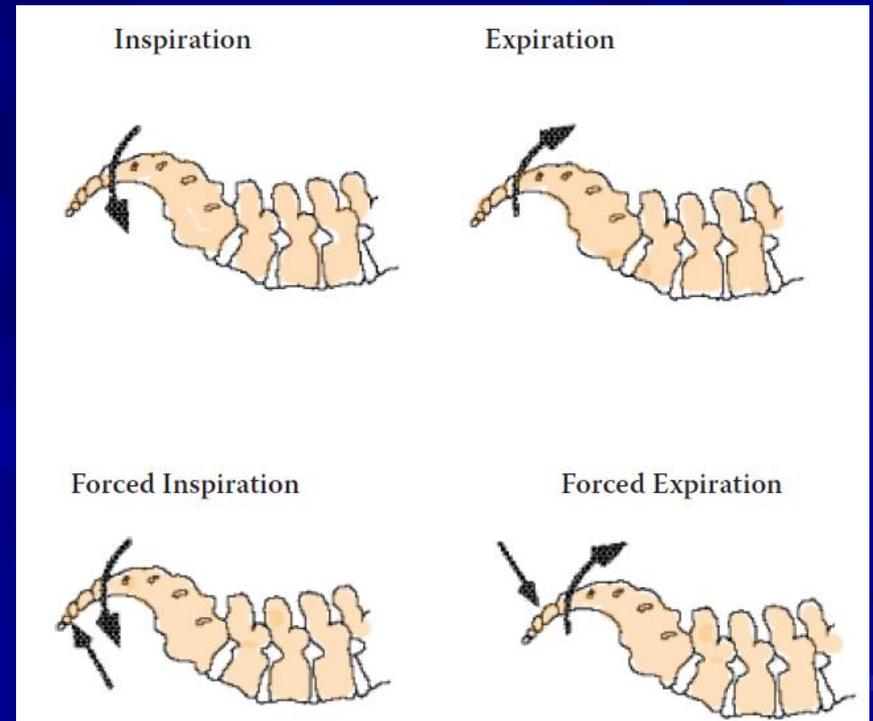
Determining FRA Subluxation Hierarchy:

1. **Pinch Skin** Over Spinous Processes, Ankles or Feet (Nociception*)
2. **Strong EXTENSOR Muscle Weakens (Flexor Withdrawal*)** When Pinching Over
“Next” Subluxation to Adjust
3. **Challenge** Vertebra, Ankle or Foot **Subluxation** Identified to Determine Direction of Correction
 - a. **If Vertebral Subluxation: Challenge** With Spine in Position of **Coupled Mechanics**
 - i. **If Coupled: Adjust Vertebra in Coupled Position**
 - ii. **If Uncoupled: CLEAR SOURCES OF UNCOUPLING** (Page Left)
 - b. **If Ankle or Foot Subluxation: Adjust** in Direction Indicted by Challenge **30**

기구를 이용한 교정



Respiration assist correction



Coupling manipulation

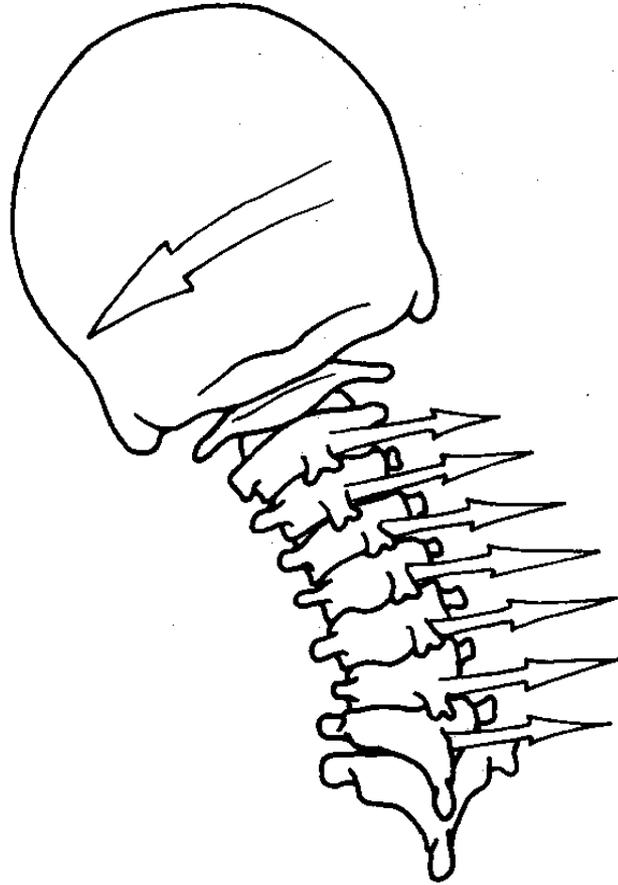


Figure 5.48 Left lateral flexion coupled with physiologic left rotation in the cervical spine.

필요한 영양소 찾아가기
(IVNT with AK)

백옥주사



비욘세주사



마늘주사

태반주사

신데렐라주사



아이유주사



감초주사



레인보우주사

- **Amino Acids, Minerals, Vitamins,
Botanical Extracts, Hydrogen Peroxide,
DMSO, MSM, Phosphatidylcholine,
Alpha Lipoic Acid, EDTA, DMPS,
Placental Extracts.**

- 티아민(thiamine), 피리독신(vitamin B6), 시아노코발라민 (vitamin B12), 판토텐산(vitamin B5), 비타민C,
- 마그네슘, 칼슘, 아연, 셀레늄, 망간, 구리, 크롬
- alpha-lipoic acid, glutathione, licorice, placenta extract

Allowance or optimal for nutrition?

- 1998, FNB 엽산 400ug 섭취 권고
- 27종의 미네랄, 비타민 그리고 미량원소는 최소한의 섭취용량 권고
- Recommended Daily Allowance(RDA)
- Recommended Daily Intake(RDI)
- Suggested optimal nutrition intakes(SONI)
- Optimal??

Rationale for IV therapy

1. 소화 효소의 작용에 의해 일어날 수 있는 영양소의 변형을 피하여 직접적으로 세포 영양 공급
2. 경구용 제제의 농도보다 더 높은 세포내 및 세포외 농도가 가능
3. 즉각적인 치료 효과 기대
4. INVT가 영양소 결핍을 해결할 수도.

Why Nutritional IV's?

- Many patients have inadequate nutritional intake due to:
 - Achlorhydria
 - Food allergies or Intolerance
- Surgery
 - Cholecystectomy
 - Gastric surgery
 - Lap band
- Inflammation
 - Gastritis
 - Crohn's disease
- Chronic use of NSAID's
- Intestinal dysbiosis, leaky Gut
- Poor diet

- Vit D 저하
- 미네랄 저하
- 장누수증후군
- Oxidative Stress
- Subclinical Hypothyroidism
- 간, 신장기능장애
- 만성 염증
- 당뇨
- 비타민 B군 저하
- 미네랄 부족 등.....

Theoretical Basis for IVNT

- 영양소의 정맥주사가 경구용 혹은 근육용 주사에 의해서는 획득될 수 없는 혈중 농도에 도달할 수 있다.
- 용법에 따른 Vitamin C 농도

Administration Serum concentration

Oral, 200mg/day 1.2mg/dL

Oral, 2500mg/day 1.5mg/dL

Oral, highest concentration 9.3mg/dL

IV 50g/day 80mg/dL

Theoretical Basis for IVNT

- 다양한 영양소들이 약물학적 효과가 나타나는데, 이는 영양소의 농도에 따라 다르다.
- 예; 비타민 C의 항바이러스 효과는 10-15 mg/dL 혈중 농도에서 나타나는데, 이는 경구용에서는 불가능하며, 정맥주사에서 가능함.

- **Combinations of Vitamin C and Conventional Agents**

Agent Used Decrease in Cancer Growth

Vitamin C**	-5.0 %*
5-FU	38.0%
5-FU + vitamin C	95.5%
X rays	72.0%
X-rays + vitamin C	98.2%

by the University of Colorado.

혈액 검사를 통한 스크린

- CBC D/C
- LFT and Kidney Panel
- Thyroid Function Test
- Lipid Panel
- 철분대사 : 철분, Ferritin
- 비타민 D : 25-OH cholecalciferol
- 미네랄 : Na, K, Ca, Cl, Mg, Zn
- Hgb A1C
- hsCRP
- Fibrinogen
- Homocysteine
- 기타 일반 생화학 검사
- TMA(Tissue Mineral Analysis)
- 소변 유기산 검사
- 타액 스트레스 호르몬 검사
- 필수 지방산 검사
- 혈중 아미노산 검사



Minerals

- Two categories:
 - macrominerals $> 0.005\%$
 - microminerals $< 0.005\%$
- macrominerals are essential at levels of 100mg or more per day for human adults
- microminerals are often referred to as trace elements

Macrominerals

Ca	calcium	1200 grams
P	phosphorus	860 grams
S	sulfur	300 grams
K	potassium	180 grams
Cl	chloride	74 grams
Na	sodium	64 grams
Mg	magnesium	25 grams

Microminerals

F	fluorine	2.6	V	vanadium	0.018
Zn	zinc	2.0	Sn	tin	0.017
Cu	copper	0.1	Se	selenium	0.013
I	iodine	0.025	Mn	manganese	0.012
Cr	chromium	0.006	Ni	nickel	0.010
Co	cobalt	0.0015	Mo	molybdenum	0.009
Si	silicon	0.024			

Metalloenzymes

Examples of metalloenzymes:

- superoxide dismutase (Zn and Cu)
- carboxypeptidase A (Zn)
- carbonic anhydrase (Zn)
- cytochrome oxidase (Fe and Cu)
- xanthine oxidase (Co and Fe)

Metal-activated enzymes

- Examples of metal-activated enzymes
 - creatine kinase (Mg, Mn, Ca or Co)
 - glycogen phosphorylase kinase (Ca)
 - salivary and pancreatic alpha-amylases (Ca)

Water Soluble Vitamins

- B₁, thiamine
- B₂, riboflavin
- B₆, pyridoxamine
- B₁₂
- Biotin
- Pantothenic acid
- Niacin
- Folic acid
- Vitamin C

Fat Soluble Vitamins

- **A** – orange, carotenoids, vision, antioxidant- used as color and antioxidant
- **D** – we make it with sunlight, deficiency causes rickets, in milk, regulates Ca:P ratios
- **E** – tocopherols, antioxidants, role in preventing stroke, cancer, heart disease- used as antioxidant
- **K** – contributes to blood clotting factor

Basic IVNT(Intra-Venous Nutritional Therapy) Protocols

1. Myers' Cocktail Protocol

일반적으로 임상적용에 있어 칼슘은 사용하지 않는 경향이 있습니다. 각 제품에 따라 혼합된 성분, 농도 및 용량이 매우 다양하고 적용 대상자의 상태에 따라 많은 변화가 발생할 수 있으므로, 질환 별 임상 적용에 있어, 성분, 농도 및 용량을 정확히 확인 후 사용하시기 바라며, 상기 자료는 단지 참고 자료로만 활용하시기 바랍니다.

2. Riordan Protocol

3. Vit C Protocol

4. PNT Protocol

5. 꼭 주의하여야 할 사항

- 1) 혼합된 수액의 농도 (Osmolality)를 계산하고 수액을 선택하여야 하며, 절대로 저장액 수액이 되어선 안 됩니다.
- 2) 모든 수액 또는 주사제는 과민성이 있을 수 있으니 처음 주사시에는 과민성 반응을 꼭 잘 살펴야 합니다.
- 3) 수액은 미리 혼합하시지 마시고, 주사 직전 혼합이 원칙이며, 주사 전에 혼합 수액에 추출물의 유무를 확인하는 습관이 중요합니다.
- 4) 주사를 통한 부작용과 합병증에 대해 알고 있어야 하며, 가능한 그런 일이 발생하지 않도록 최선을 다해야 합니다.

Myers' Cocktail

- **Magnesium chloride hexahydrate 20% (magnesium)**
- **Calcium gluconate 10% (calcium)**
- **Hydroxocobalamin 1,000 mcg/mL (B12)**
- **Pyridoxine hydrochloride 100 mg/mL (B6)**
- **Dexpanthenol 250 mg/mL (B5)**
- **B complex 100 (B complex)**
- **Vitamin C 222 mg/mL (C)**

Myers' Cocktail Protocol

단위 (mL)	20% Mg	3% Ca	B5	B6	B12	B-Com	Vit.C
Asthma	5	—	2	1	2	2	15
Migraine	3~5	10	2	1	2	4	10
Fatigue	5	5	2	1	2	4	15
Acute Viral Hepatitis	3	5	2	1	2	4	15
Fibromyalgia	5	10	2	1	2	4	10
Cardiovascular Dis.	4	10	2	1	2	4	10
Acute URI	2	5	1	1	1	2	10~15
Chr. Sinusitis	2	5	1	1	1	2	10
Allergic Rhinitis	3	—	2	1	2(I.M.)	2	15
Chr. Urticaria	3	—	1	1	1	2	15
Athletic Performance	4	10	2	1	2	2	15
Dysmenorrhea	4	5	2	1	2	4	10

Myers' Cocktail Protocol

질환 \ 영양 (ml)	Vitamins					Minerals	
	C 222mg	B5 250mg	B6 100mg	B12 1mg	B-complex 100 B1,B3 100mg/B2,5,6 2mg	20%MgCl	3% Calcium Gluconate
일반적인 경우	6	1	1	1	1	4	2
천식	15	2	1	2	2	5	-
편두통	10	2	1	2	4	3-5	10
피로	15	2	1	2	4	5	5
급성 간염 (Viral)	15	2	1	2	4	3	5
섬유근통	10	2	1	2	4	5	10
심혈관 질환	10	2	1	2	4	4	10
감기 (URI)	10-15	1	1	1	2	2	5
만성 부비동염	10	1	1	1	2	2	5
알레지성 비염	15	2	1	2	2	3	-
만성 두드러기	15	1	1	1	2	3	-

Riordan Protocol

IV Nutrition Protocols	Key Nutrients Added	Functional Results
IV Energy	Pantothenic Acid, Magnesium	Better adrenal function / less fatigue
IV Immunity	Vitamin C additional 10,000 mg	Improved resistance to infections
IV Vision	Selenium	Better retinal health / visual acuity
IV Calm	Calcium	Resilience to stress / more relaxed
IV Detox	Glutathione	Enhanced phase-2 liver detox pathway
IV Skin-care	Zinc	Smoother, softer skin / better blood flow

The Riordan IVC Protocol for Adjunctive Cancer Care

Intravenous Ascorbate as a Chemotherapeutic and Biological Response Modifying Agent

solution, MEGA-C-PLUS®, 500 mg/mL, pH range 5.5-7.0 from Merit Pharmaceuticals, Los Angeles, CA, 90065.

Treatment volume of Ascorbic acid	Solution Volume		Withdraw from solution and discard	remaining solution	Inject volume of AA into solution	inject volume of MgCl ₂ into solution	final volume	Infusion rate	total infusion time
	Ringer Lactate	Sterile water							
15 grams (30cc)	250 cc		31cc	219 cc	30 cc	1 cc	250 cc	0.5-1.0 g/min	~ 0.5 h
25grams (50cc)	500cc		51cc	449cc	50cc	1cc	500cc	0.5-1.0 g/min	~ 1 h
50 grams (100cc)		500cc	102cc	398 cc	100 cc	2cc	500cc	0.5-1.0 g/min	~ 1.5 h
75 grams (150cc)		750cc	152cc	598cc	150cc	2cc	750cc	0.5-1.0 g/min	~ 2.5 h
100grams		1000c	202cc	798cc	200cc	2cc	1000c	0.5-1.0 g/min	~ 3.5 h

PNT

Placenta : human Placenta Extract (Laennec, Green-Cross)
 Nutritional : Vitamin, Mineral & Herbs (IVNT , IM, Supplements)
 Therapy : Target & Systemic Therapeutic Injection (IM & IVNT)

PNT- HAL Protocol	PNT- Liver Protocol	PNT-QOL Protocol	PNT-Basic Protocols
Laennec 5@	Laennec	Laennec	1. Laennec SQ Abdomen : 1-8@
Vit. C 10g	Hishiphagen	Amino-Acid	2. Laennec IM Deltoid, Gluteus, ParaVertebral m., etc : 1-8@
10% MgSO4 10ml	Glutathione	Vit. C	3. Laennec + Myers' Cocktail
Vit. B5 1@-3@	Lipoic Acid	Zn	4. Combination
Vit. B6 1@-3@	Vit. B5	Vit. B-Complex	5. Add the Other Protocols
Vit. B12 1@	Vit. B6	10% MgSO4	
Fursulthiamine 1@	Trace Minerals		
Hishiphagen 1-2@			
Gingko-Biloba 1@			

Protocol IVNT의 한계

1. Vit C; glucose-6-phosphate dehydrogenase(G6PD)_hemolytic anemia
2. Glutathione-it's sulfa; sulfa allergy
3. Licorie; high blood pressure, low potassium levels, hyperadrenal
4. Mg; irregular heartbeat, low blood pressure, confusion, slowed breathing
5. Vit B12; congestive heart failure, pulmonary edema

Table 5
Trace Element Deficiency and Toxicity Symptoms in Adults (2,5,6,32,48)

<i>Trace Element</i>	<i>Deficiency</i>	<i>Toxicity</i>
Manganese	Impaired metabolism of carbohydrate and lipid, dermatitis, impaired protein synthesis, weight loss. (has not been reported in PN patients).	Extrapyramidal neurologic symptoms: headache, tremor, facial nerve deficit, gait disturbance. Hyperintensity of signals on brain magnetic resonance images in basal ganglia.
Selenium	Cardiomyopathy, skeletal myopathy, myalgias, myositis, impaired cellular immunity, discoloration of nails.	Alopecia, brittle hair and nails, skin rash, GI disturbance, "garlic" breath odor, nervous system abnormalities.
Zinc	Dermatitis, alopecia, anorexia, reduced taste sensitivity, impaired immune function, impaired wound healing, glucose intolerance.	Anemia, hyperamylasemia, fever, central nervous system dysfunction in renal patients; deficiency of Cu (<i>enteral</i> Zn interferes with Cu absorption).
Chromium	Glucose intolerance, hyperlipidemia, peripheral neuropathy, encephalopathy	No known toxicity of Cr ³⁺ (trivalent form). Has not been reported in PN patients.
Copper	Hypochromic, microcytic anemia, leukopenia, neutropenia, skeletal abnormalities, and rarely, thrombocytopenia.	Accumulation in liver, hepatocellular damage.
Iron	Hypochromic microcytic anemia, pallor, fatigue, decreased work performance.	Hemosiderosis, hemochromatosis, accumulation in liver and heart, some endocrine tissues; iron toxicity can be fatal.
Molybdenum	Tachycardia, tachypnea, headache, night blindness, lethargy.	Limited toxicity data for humans. Possible gout (high incidence in areas where soil is high in Mo), and possible excessive urinary copper excretion.
Iodine	Hypothyroidism – weakness, cold intolerance, weight gain, thinning hair, goiter (thyroid enlargement).	Thyroiditis, goiter, hypo- or hyperthyroidism, thyroid papillary cancer, dermatoses (iodermia).

AK guided nutritional approach

Muscle-Organ relationship

Chapman reflex point

Alarm point

Muscle-Organ relationship

- 간(Liver)-대흉근 흉골지(PMS), 능형근
- 담낭(Gall bladder)-슬와근
- 위(Stomach)-대흉근 쇠골지(PMC), 이두근, 상완근, 상완요근, 방형회내근, 원회내근, 회외근, 모/소지 대립근
- 췌장(Pancreas)-광배근, 삼각근
- 비장(Spleen)-중/하부 승모근
- 생식기(Sex organ)-이상근, 대둔근, 중둔근, 소둔근
 - 폐경기: 내전근
- 대장(Large intestine)-TFL
 - 충수: 요방형근 / 직장: hamstring
- 소장(Small intestine): 복근군, 대퇴사두근

Muscle-Organ relationship

- 부신(adrenal)-봉공근(medullar), 박근(cortex), 가자미근, 비복근, 후경골근
- 방광(Bladder)-전경골근, 장/단비골근, 제3비골근, 척추기립근
- 폐(Lung)-전거근, 삼각근, 오혜완근, 견갑거근
- 심장(Heart)-견갑하근
- 흉선(Thymus)-극하근
- 뇌(Brain)-극상근
- 갑상선(Thymus)-소원근
- 신장(Kidney)-장요근, 요근
- 눈, 귀(Eye/ear)-상부승모근
- 부비동(Sinus)-SCM

Muscle-nutrition relationship

- Deltoids; respond to supplementation of vitamin C, betacarotene
- Biceps; calcium/phosphatase deficiencies
- Abdominals; respond to vitamin E supplementation
- G-medius, Adductor; niacin, zinc and vitamins E.
- Gracilis; pantothenic acid, folic acid, vitamins C and E.
- Infraspinatus; vitamins C and A
- Latissimus Dorsi; Selenium, chromium
- Teres Minor; iodine, tyrosine
- Tensor Fascia Lata; need for iron.
- Rectus Femoris: calcium or vitamin D supplementation

AK technique-nutrition relationship

- Fascial Technique; indication of need of B-12.
- **Shock Absorber;** manganese deficiencies
- **Reactive Muscles;** raw veal bone calcium
- Grip strength, neckflexor; B6
- SCM; niacin
- Subclavius; magnesium
- Pectoralis minor; zinc

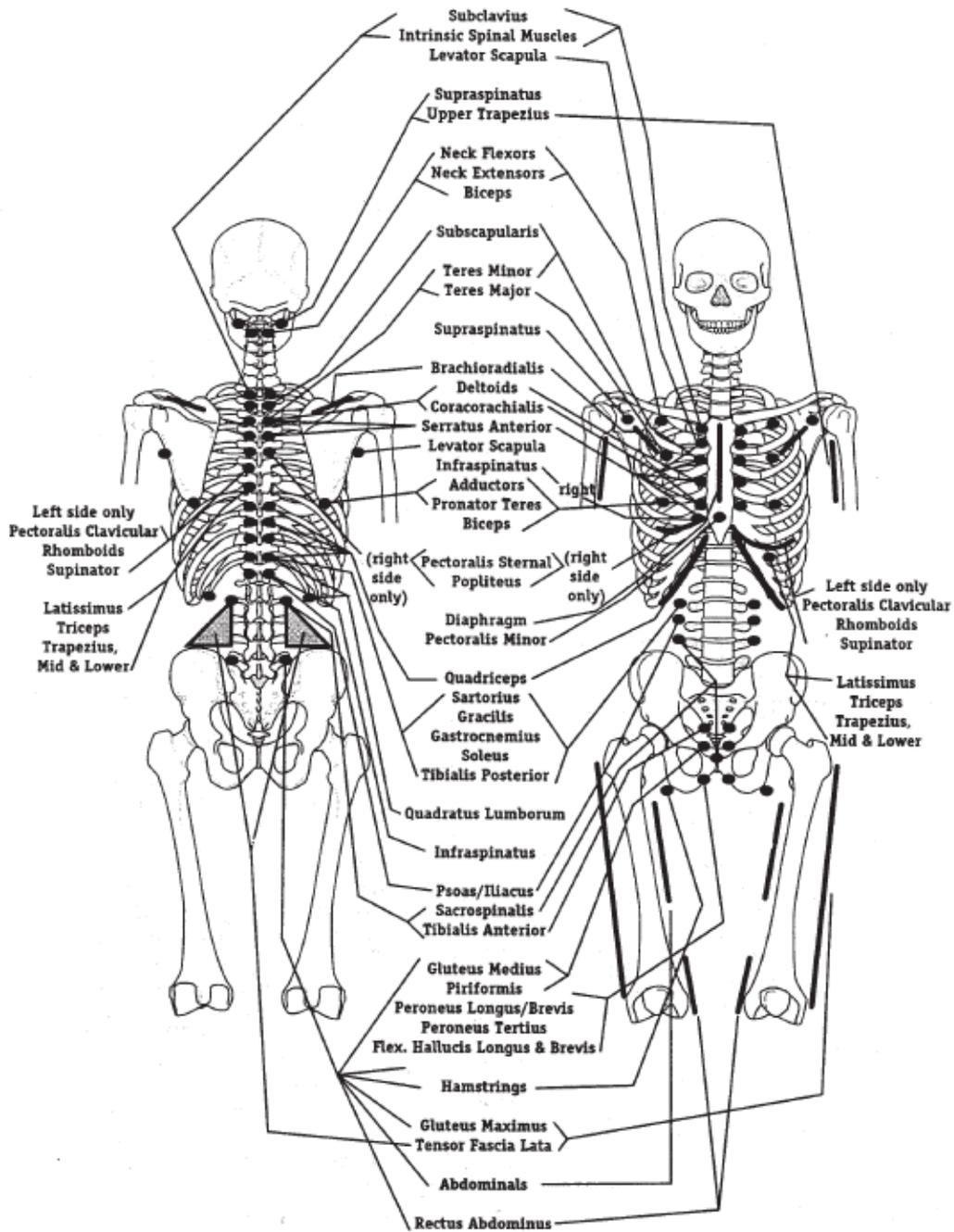
Organ-muscle-nutrition

• Organ	Muscle	Nutrient
• Adrenals	Sartorius	Adrenal Extract
• Bladder	Tibialis Anterior	B Complex
• Brain	Supraspinatus	Brain Extracts RNA
• Eyes	Upper Trapezius	Vitamins A, B, F, Calcium
• Gall Bladder	Popliteus	Bile Salts
• Heart	Subscapularis	Vitamins E & B, Heart Extracts
• Kidney	Psoas	Kidney Extracts, Vitamins A & E
• Large Intestine	Tensor Fascia Lata	Acidophilus
• Liver	Pectoralis Sternal	Liver Extracts, Vitamin A
• Lung	Deltoid	Vitamins A & C, Lung Extracts
• Ovary	Gluteus Medius	Vitamin E, Endocrine Extracts
• Pancreas	Latissimus Dorsi	Vitamins A & F, Pancreas Extracts
• Parathyroid	Levator Scapula	Calcium with Parathyroid Extracts
• Prostate	Piriformis	Calcium, Vitamin F
• Sinus	Neck Flexors	Vitamin B-6, Niacinamide
• Spleen	Mid Trapezius	Spleen Extracts, Vitamin C
• Small Intestine	Quadriceps	Calcium, Vitamin B
• Stomach	Pectoralis Clavicular	Betaine Hydrochloride
• Thymus	Infraspinatus	Thymus Extracts
• Thyroid	Teres Minor	Thyroid Extracts, Iodine

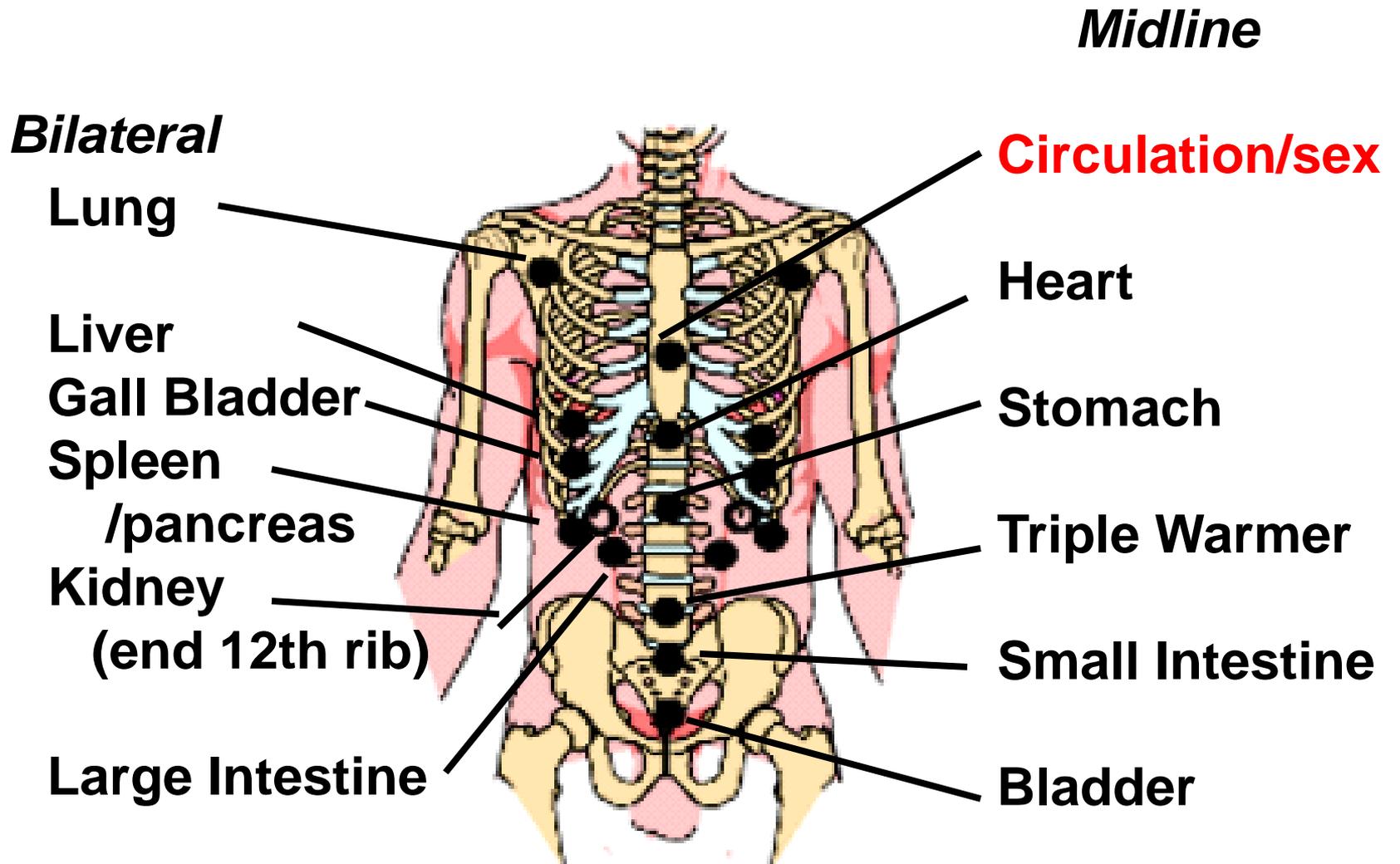
Reflex point

-chapman's reflex point(NL)

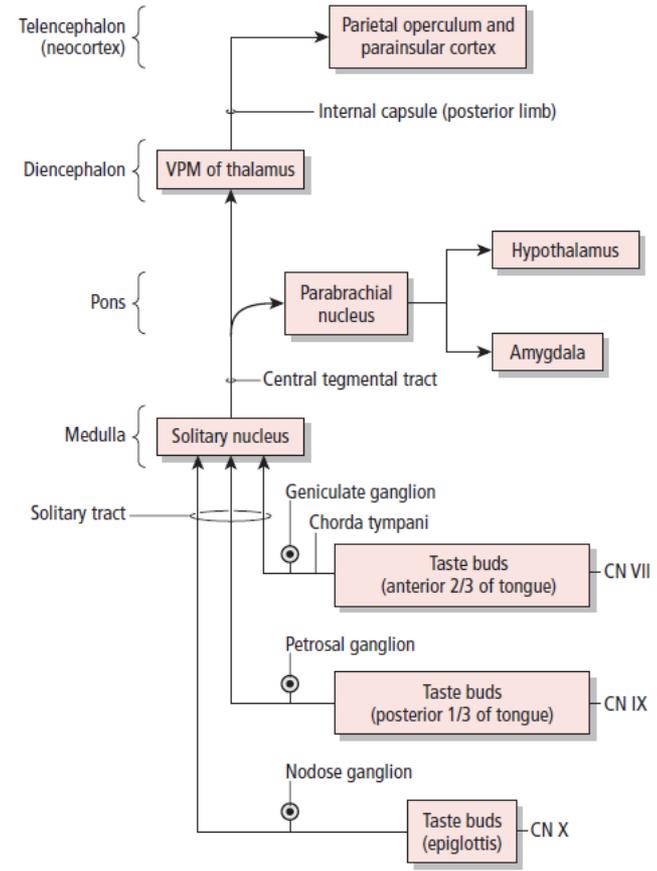
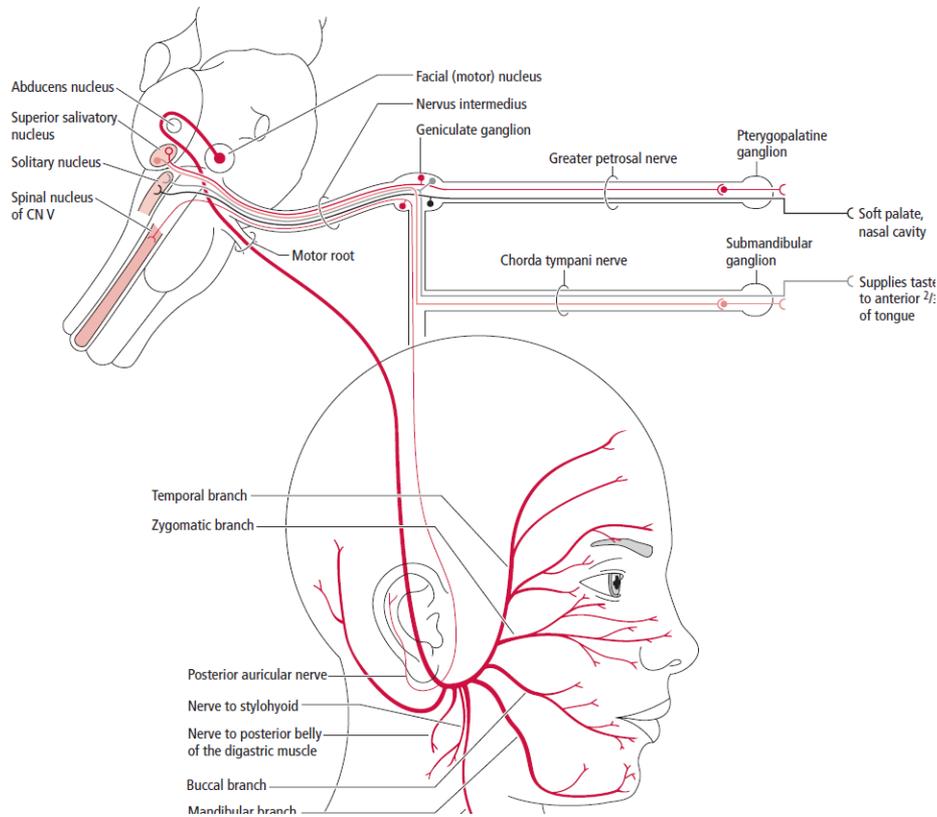
- 1930년대 Frank Chapman, D.O.
- **반사점-특정 장기/내분비선** 과의 상관관계
- 해당 장기의 lymphatic drainage를 촉진시킴으로써 organ의 기능 개선.
- Goodheart는 해당 **장기와 상관관계에 있는 근육**이 약해져 있을 때 chapman's reflex point를 치료함으로써 강화될 수 있음을 발견
- Challenge: TL



Alarm Points



NTS(Nucleus tractus solitarius)



Electromagnetic field

- Magnetoreception
- Trigeminal(v1)
- Cryptochrome(CRY1 and CRY2)