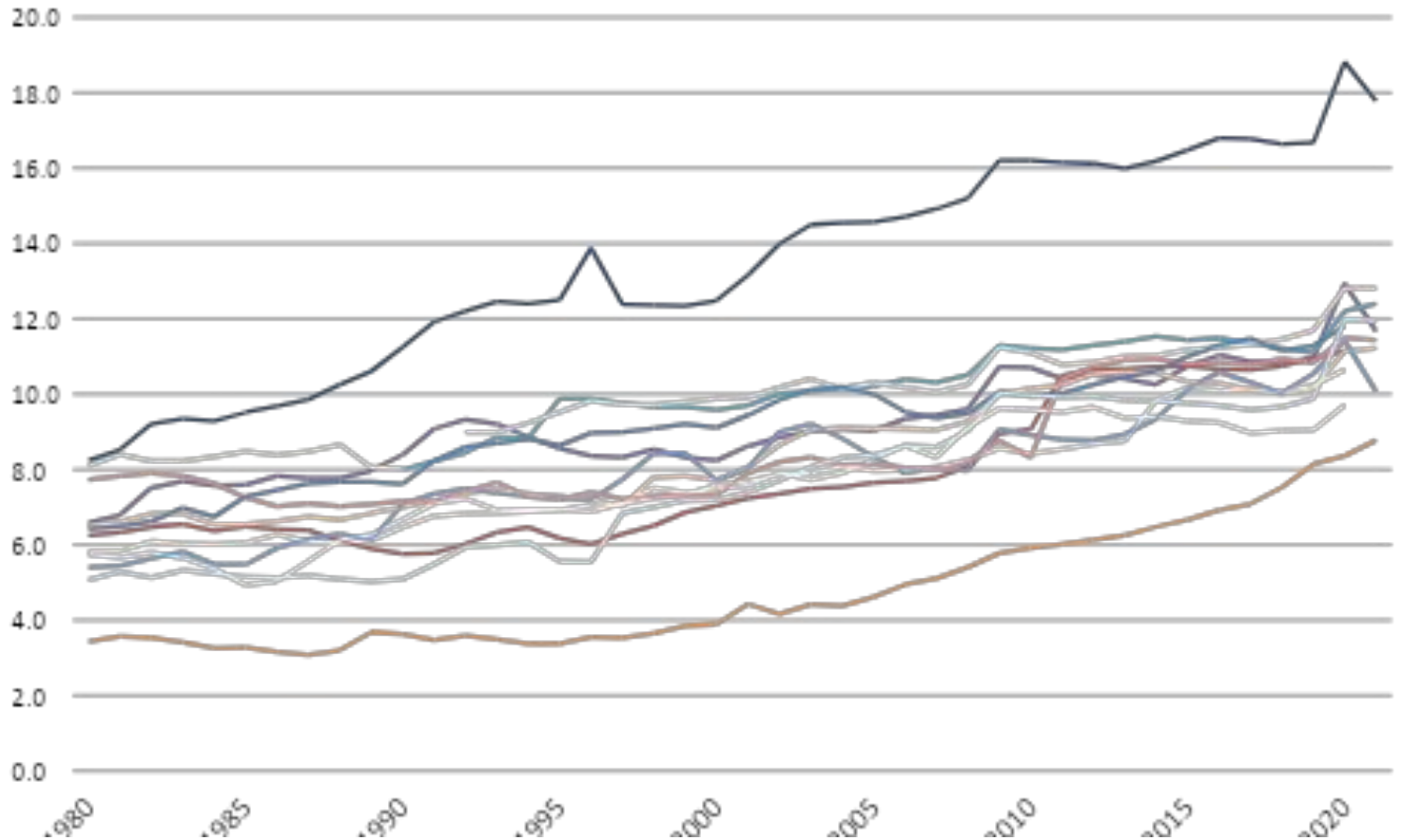
USA Healthcare System

Despite having the most expensive health care system, the United States ranks last overall compared with six other industrialized countries—Australia, Canada, Germany, the Netherlands, New Zealand, and the United Kingdom—on measures of quality, efficiency, access to care, equity, and the ability to lead long, healthy, and productive lives.

The U.S. is a world outlier when it comes to health care spending.

*Percent of GDP spent on health, 1980–2021**



2021 data (or latest available year):*

AUS: 10.6%*
CAN: 11.7%
FRA: 12.4%
GER: 12.8%
JPN: 11.1%*
KOR: 8.8%
NETH: 11.2%
NZ: 9.7%*
NOR: 10.1%
SWE: 11.4%
SWIZ: 11.8%*
UK: 11.9%
US: 17.8%

OECD average: 9.6%

Notes: * 2020 data. Current expenditures on health for all functions by all providers for all financing schemes. Data points reflect share of gross domestic product. Based on System of Health Accounts methodology, with some differences between country methodologies. GDP = gross domestic product. OECD average reflects the average of 38 OECD member countries, including ones not shown here.

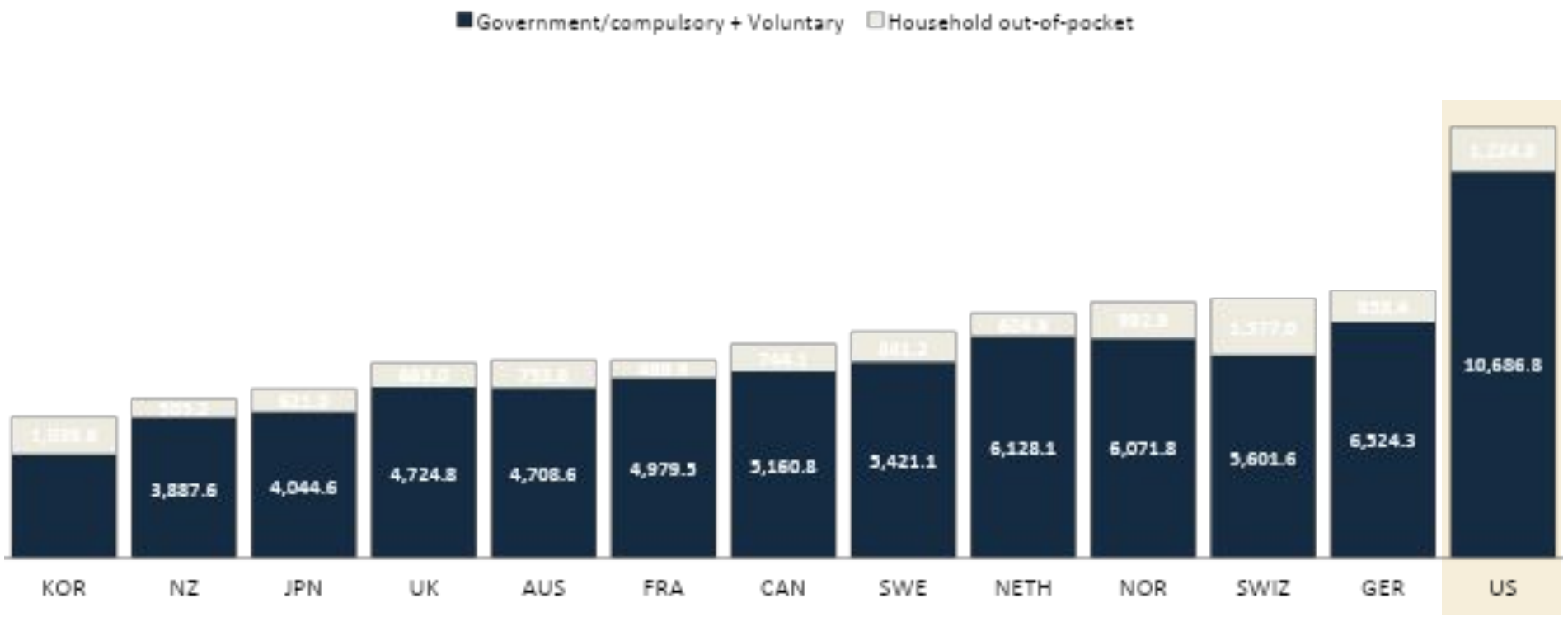
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. spends three to four times more on health care than South Korea, New Zealand, and Japan.

Dollars (USD) per capita spend on health expenditures



Notes: Data reflects all financing schemes on all functions of current expenditures on health by all providers. The OECD considers the vast majority of ACA marketplace plans in US to be "government/compulsory spending" because of the individual mandate, despite its repeal in 2018. See here for more information: https://www.oecd.org/health/Spending-on-private-health-insurance-Brief-March-2022.pdf. Government/compulsory spending data: 2021 data for CAN, GER, KOR, NETH, NOR, SWE, and UK; 2020 data for AUS, FRA, JPN, NZ, SWIZ, and US. Voluntary spending data: 2021 data for CAN, GER, KOR, NETH, NOR, SWE, and UK. 2020 data for FRA, JPN, SWIZ, and US; 2019 data for AUS; 2018 data for NZ. Household out-of-pocket spending data: 2021 data for CAN, GER, KOR, NETH, NOR, SWE, UK, and US; 2020 data for FRA, JPN, and SWIZ; 2019 data for AUS; 2018 data for NZ.

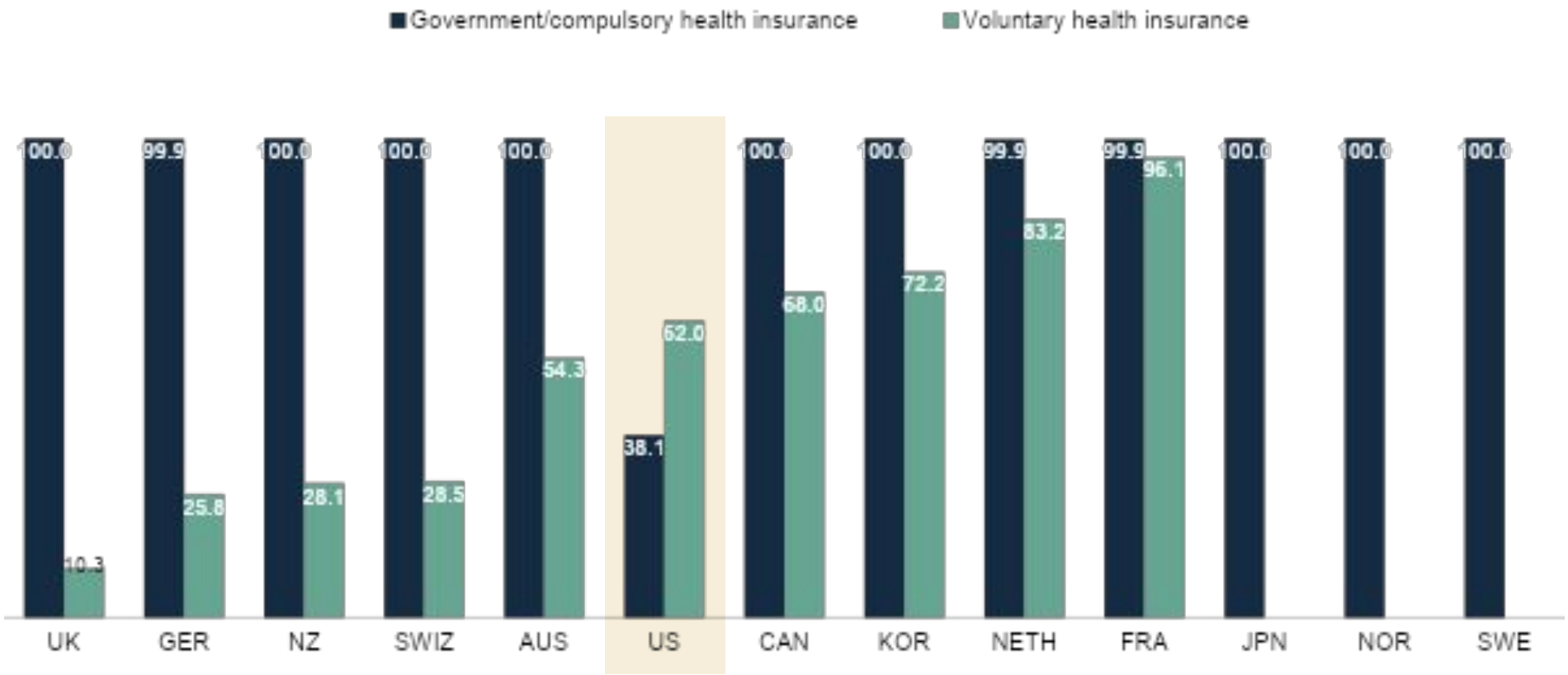
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. is the only high-income country that does not guarantee health coverage.

Percent of total population with health insurance coverage



Notes: Government/compulsory health insurance data: 2021 data for AUS, CAN, FRA, NZ, and NOR; 2020 data for GER, KOR, NETH, SWE, SWIZ, UK, and US; 2019 data for JPN. Voluntary health insurance coverage data: 2021 data for AUS, CAN, and NZ; 2020 data for GER, KOR, NETH, and US; 2019 data for UK; 2017 data for FRA and SWIZ. Government health insurance refers to public benefit basket covering a minimum set of health services. Voluntary health insurance refers to payments for private insurance premiums, which grant coverage for services from private providers. See more information on definitions here: https://www.oecd.org/health/Spending-on-private-health-insurance-Brief-March-2022.pdf.

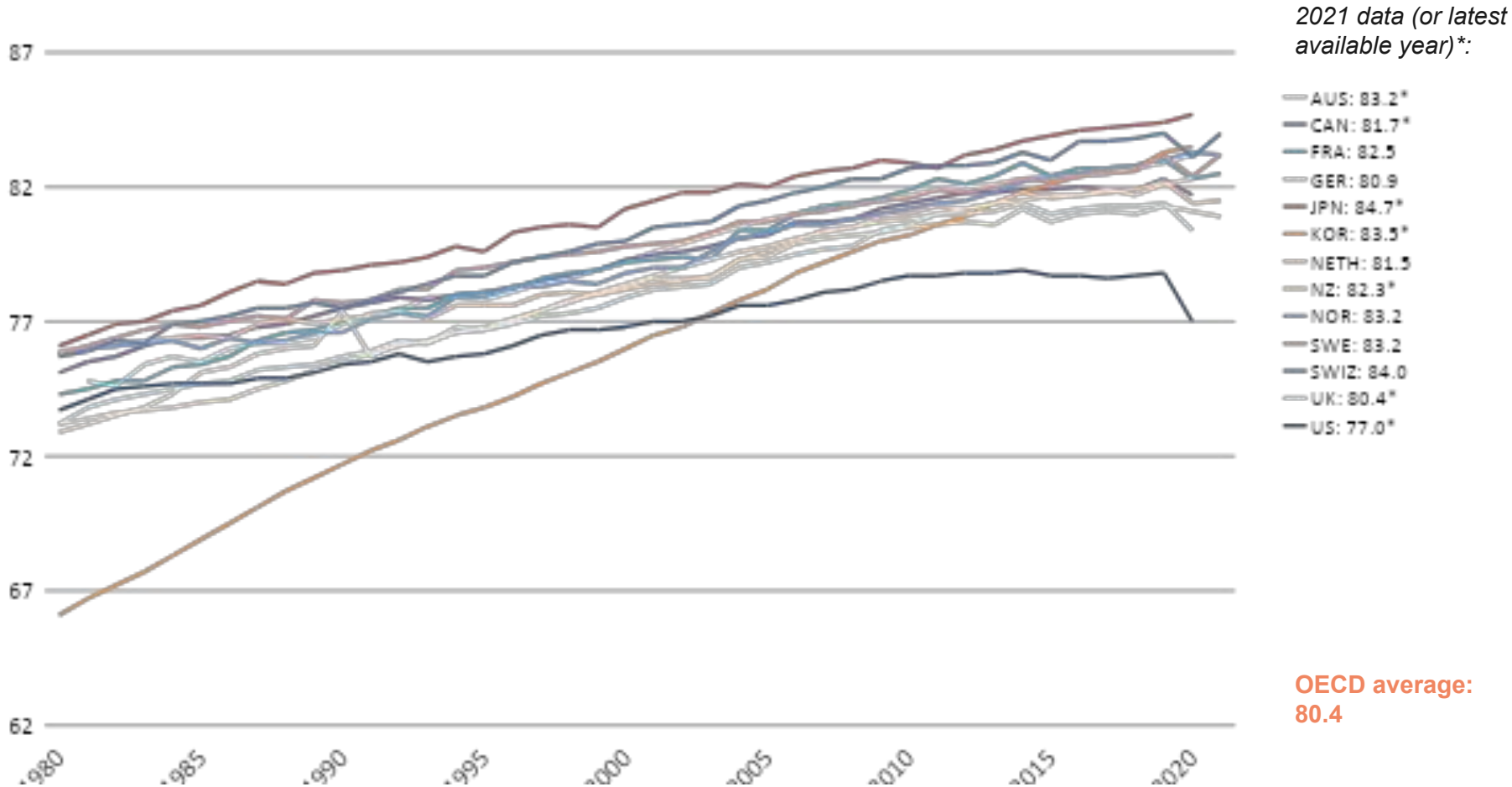
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

U.S. life expectancy at birth is three years lower than the OECD average.

*Years expected to live, 1980–2021**



Note: * 2020 data. Total population at birth. OECD average reflects the average of 38 OECD member countries, including ones not shown here. Because of methodological differences, JPN and UK data points are estimates.

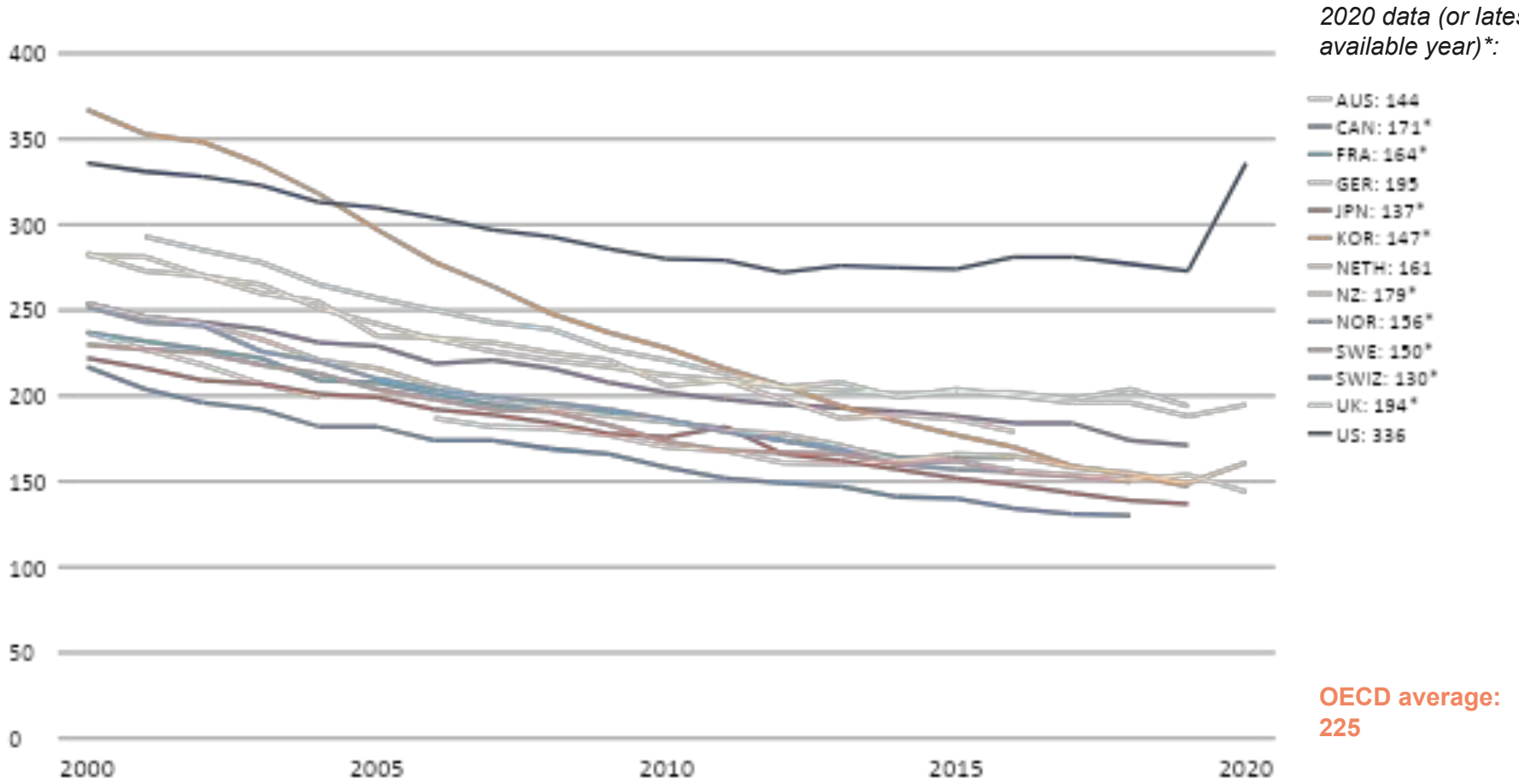
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Avoidable deaths per 100,000 population in the U.S. are higher than the OECD average.

*Avoidable deaths per 100,000 population (standardized rates), 2000–2020**



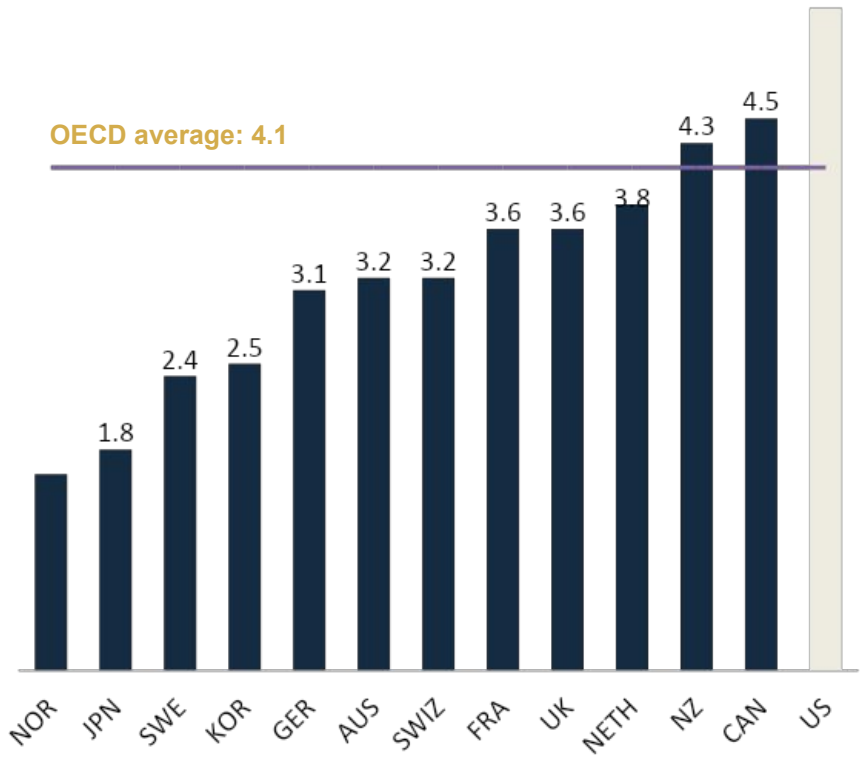
Notes: Rates reflect age-standardized rates. Avoidable mortality includes deaths which are preventable and treatable. * 2019 data for CAN, JPN, KOR, and UK; 2018 data for SWE and SWIZ; 2016 data for FRA, NZ, and NOR.

Data: OECD Health Statistics 2022.

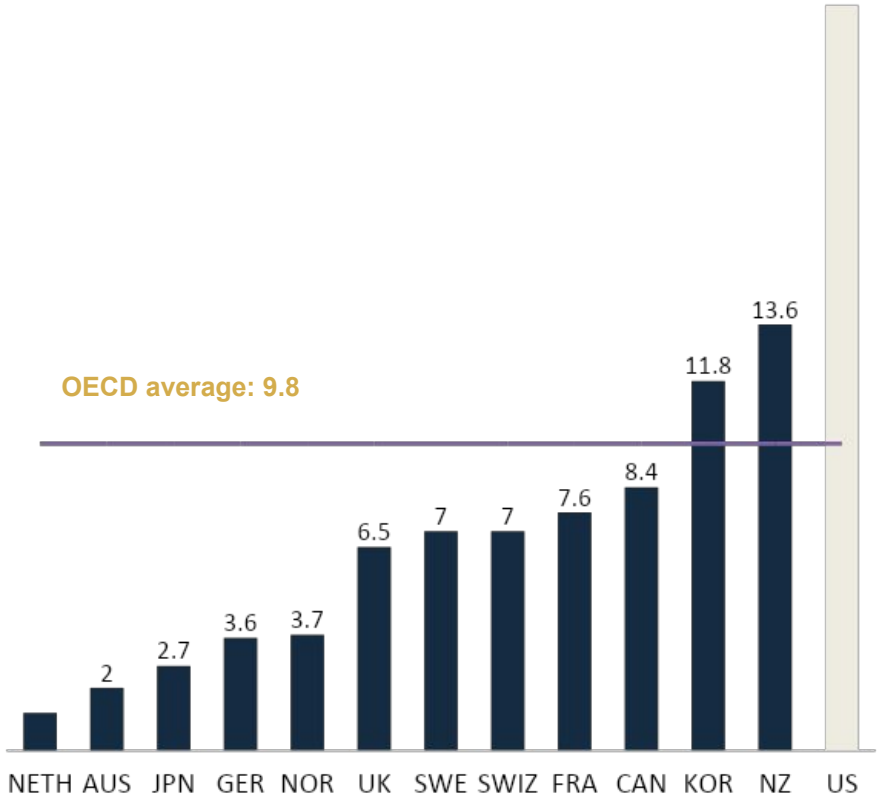
Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. has the highest rate of infant and maternal deaths.

Infant mortality, deaths per 1,000 live births



Maternal mortality, deaths per 100,000 live births



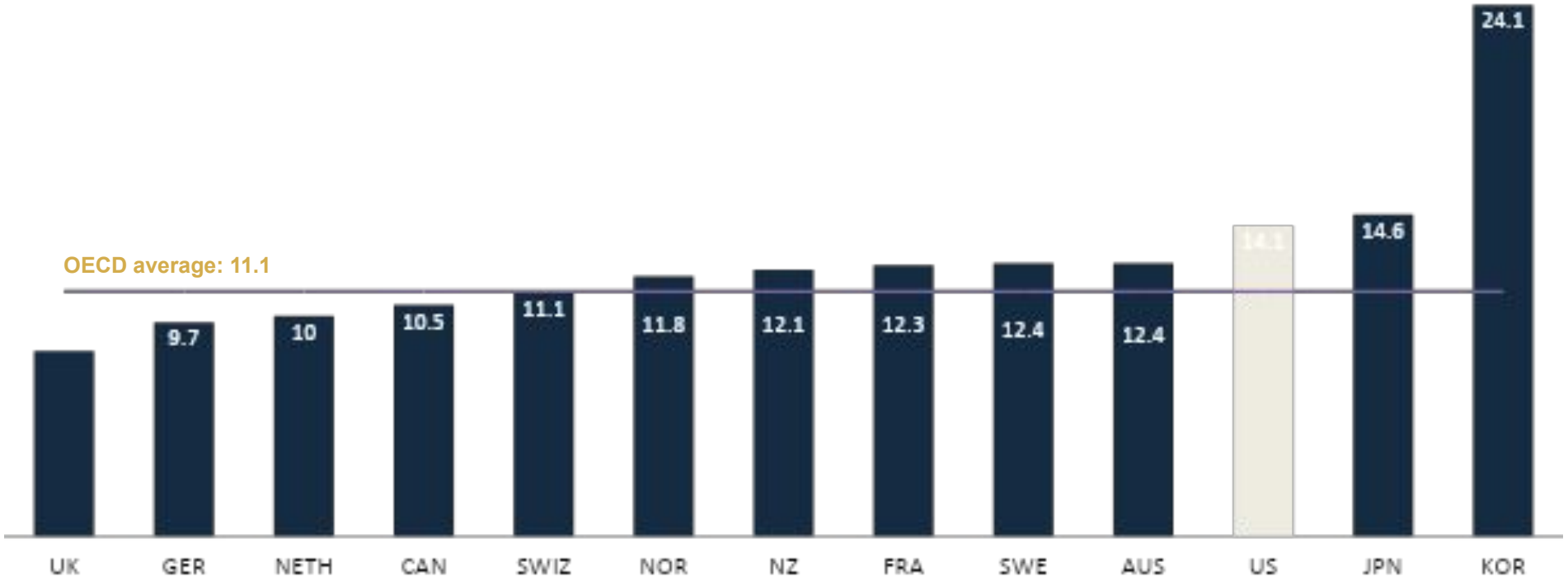
Notes: Infant mortality rates reflect no minimum threshold or gestation period or birthweight. Infant mortality 2021 data for FRA and SWIZ; 2020 data for AUS, CAN, GER, JPN, KOR, NETH, NOR, SWE, UK, and US; 2018 data for NZ. Maternal mortality 2020 data for AUS, CAN, GER, JPN, KOR, NETH, NOR, SWE, and US; 2019 data for SWIZ; 2018 data for NZ, 2017 data for UK; 2015 data for FRA. OECD average reflects the average of 38 OECD member countries.

Data: OECD Health Statistics 2022.

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Rates of suicide were highest in the U.S., Japan, and South Korea.

Intentional self-harm deaths per 100,000 population (standardized rates)



Notes: Rates reflect age-standardized rates. Intentional self-harm death rates 2020 data for AUS, GER, KOR, NETH, UK, and US; 2019 data for CAN, JPN, and SWIZ; 2018 data for SWE; 2017 data for FRA; 2016 data for NZ and NOR. OECD average reflects the average of 38 OECD member countries, including ones not shown here.

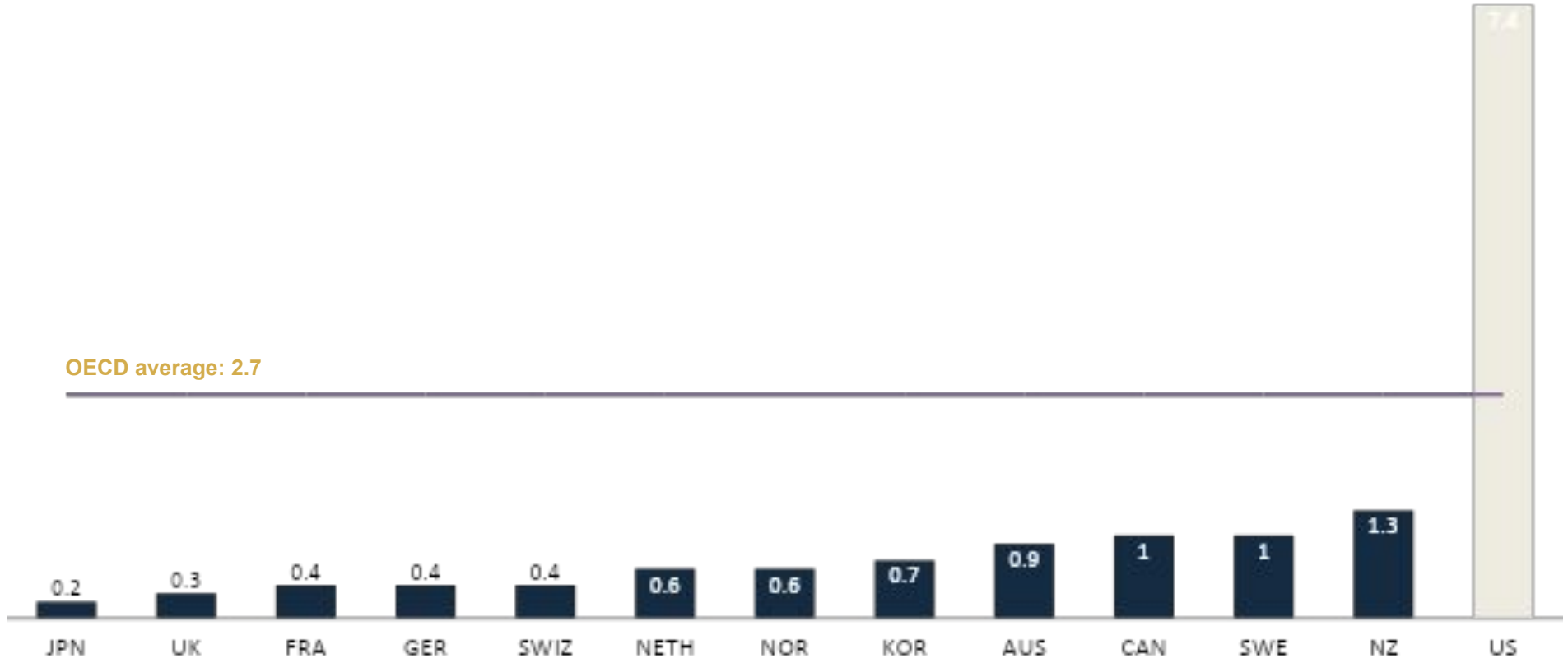
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Deaths from assault are highest in the U.S.

Mortality from assault, deaths per 100,000 population (standardized rates)



Notes: Rates reflect age-standardized rates. Mortality from assault rates 2020 data for AUS, GER, KOR, NETH, UK, and US; 2019 data for CAN, JPN, and SWIZ; 2018 data for SWE; 2017 data for FRA; 2016 data for NZ, and NOR. OECD average reflects the average of 38 OECD member countries, including ones not shown here. Definition of what includes "assault" can be found here: https://icd.who.int/browse10/2019/en#/X85-Y09.

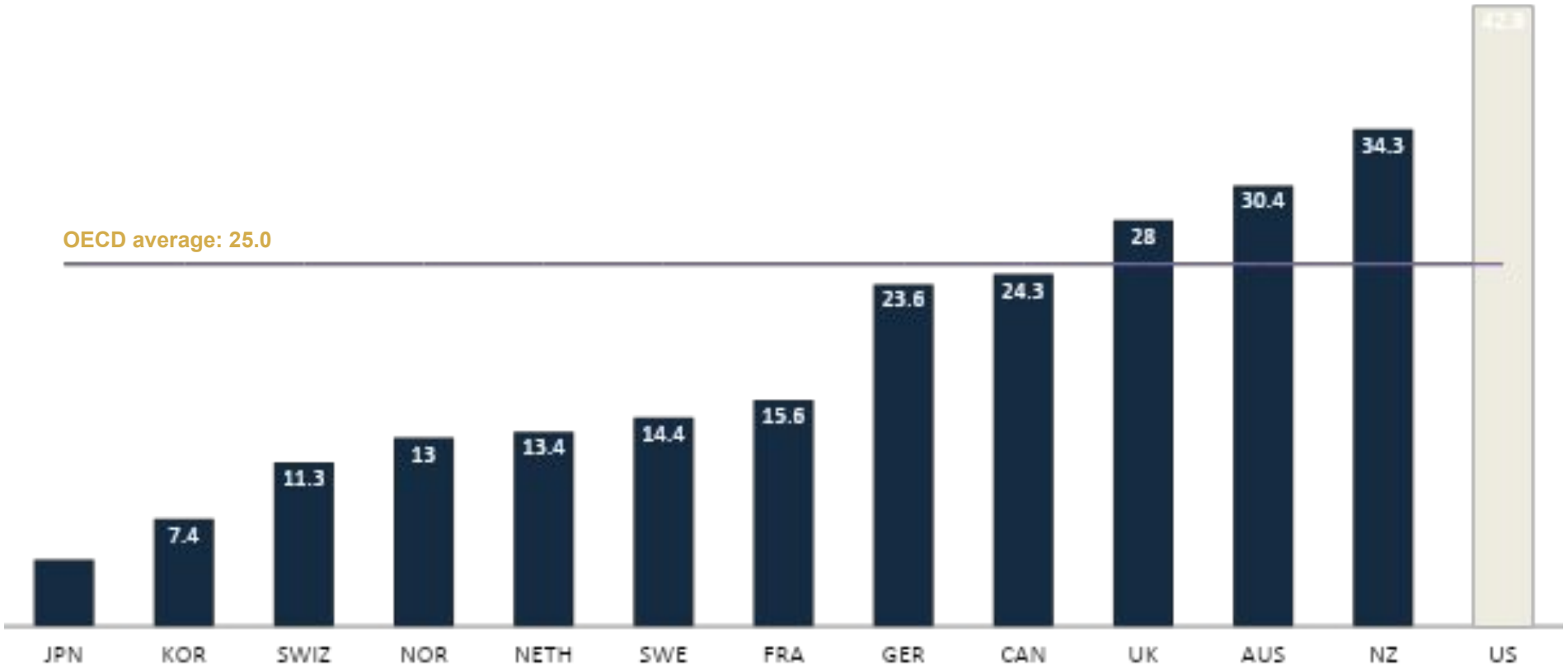
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. obesity rate is nearly double the OECD average.

Percent of total population that is obese



Notes: Obese defined as body-mass index of 30 kg/m² or more. Data reflect rates based on measurements of height and weight, except NETH, NOR, SWE, SWIZ, for which data are self-reported. (Self-reported rates tend to be lower than measured rates.) 2021 data for NZ; 2020 data for KOR, NETH, and SWE; 2019 data for CAN, JPN, NOR, UK, and US; 2017 data for AUS, FRA, and SWIZ; 2012 data for GER. OECD average reflects the average of 23 OECD member countries, including ones not shown here, which provide data on obesity rates.

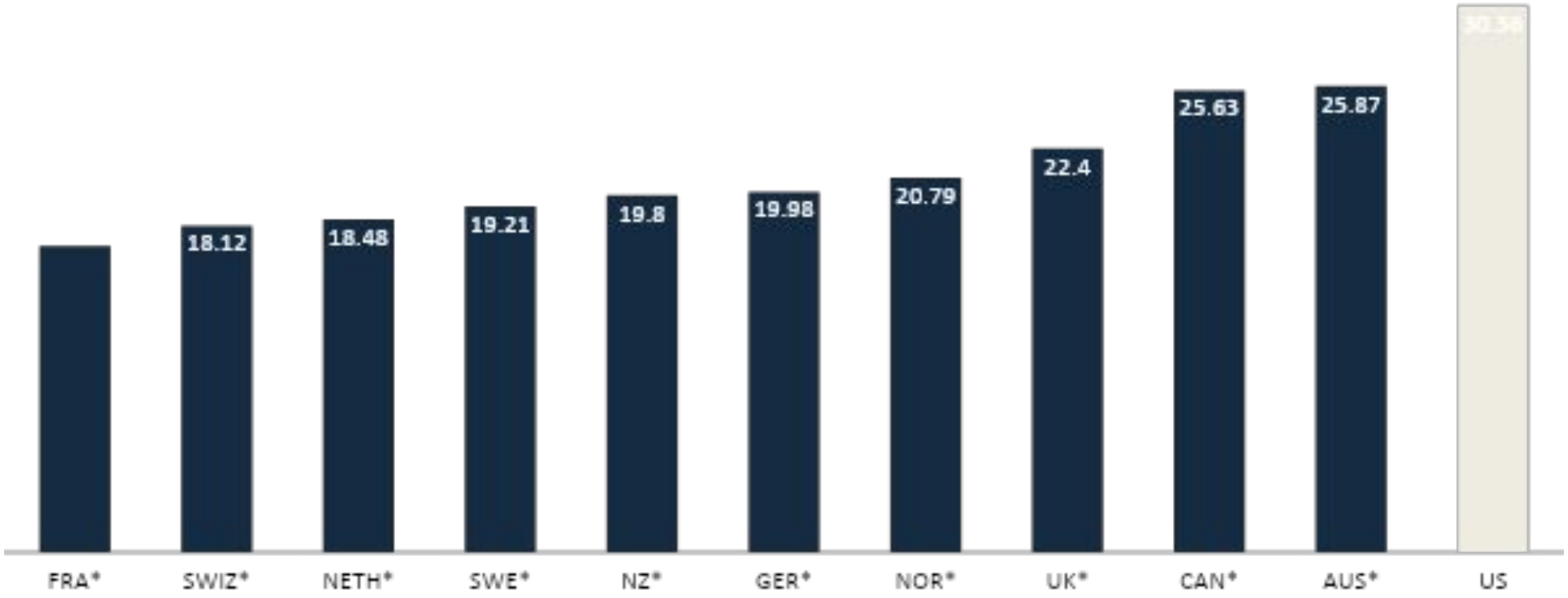
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Adults in the U.S. are the most likely to have multiple chronic conditions.

Percent of adults age 18 and older who have multiple chronic conditions



Notes: Chronic disease burden defined as adults age 18 years and older who have ever been told by a doctor that they have two or more of the following chronic conditions: asthma or chronic lung disease; cancer; depression, anxiety or other mental health condition; diabetes; heart disease, including heart attack; or hypertension/high blood pressure. Data reflect 11 countries which take part in the Commonwealth Fund's International Health Policy Survey.

* Statistically significant differences compared to US or comparator bar at p<.05 level.

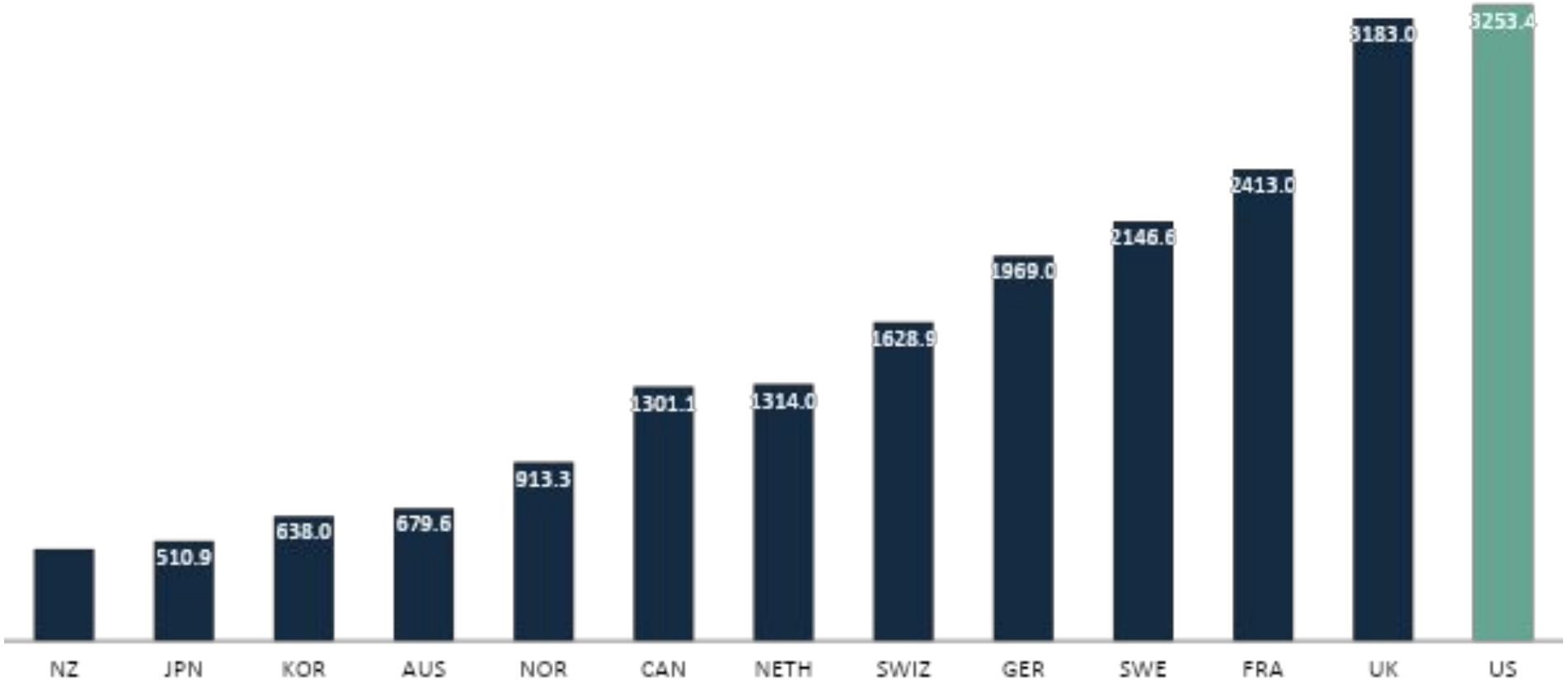
Data: Commonwealth Fund International Health Policy Survey, 2020.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. has the highest rate of death because of COVID-19.

Deaths per 1 million because of COVID-19



Notes: Rate per 1 million people who have died from COVID-19 since January 22, 2020. Available data as of January 18, 2023.

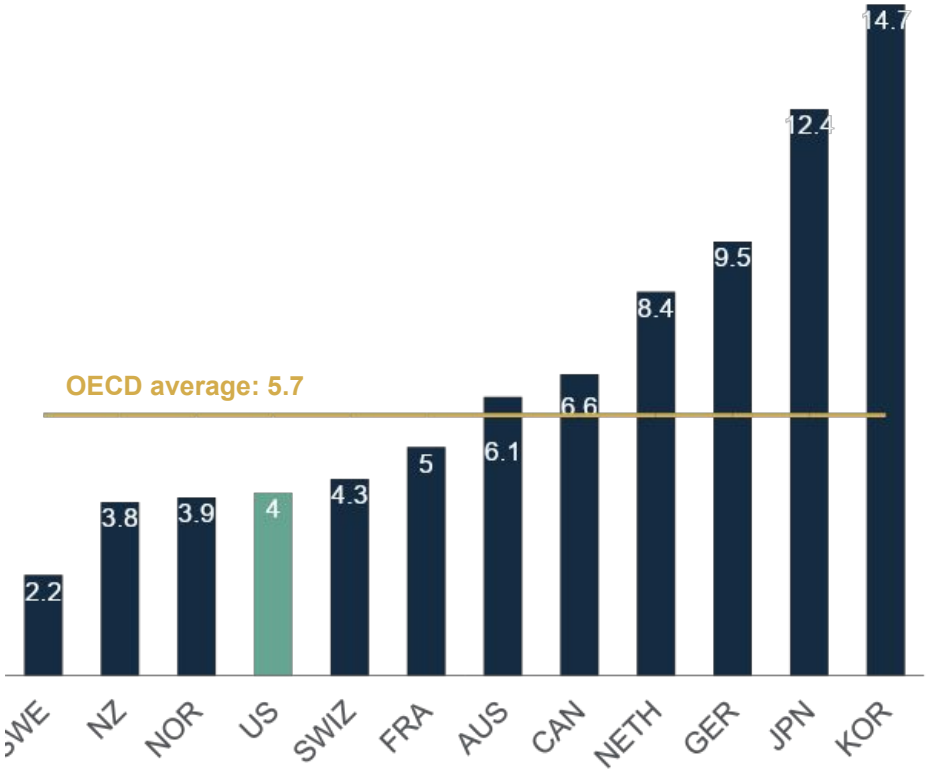
Data: Our World in Data.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. has among the lowest rates of physician visits and practicing physicians.

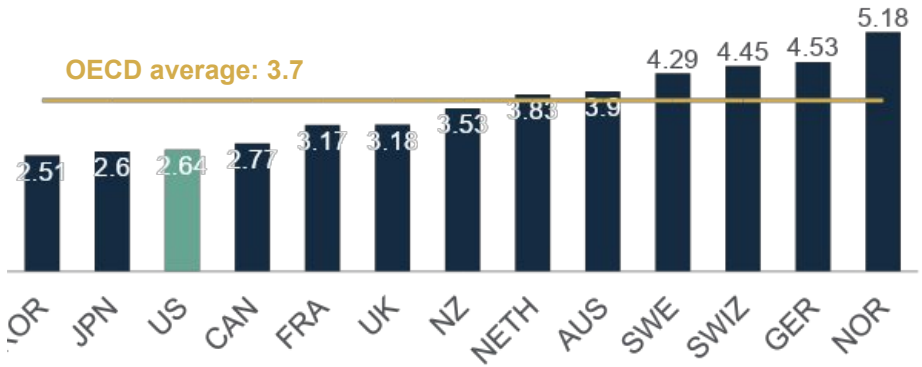
Physician consultations in all settings per capita



Notes: Data for UK not available. 2021 data for AUS and NOR; 2020 data for FRA, GER, KOR, NETH, and SWE; 2019 data for CAN and JPN; 2017 for NZ and SWIZ; 2011 data for US. OECD average reflects the average of 37 OECD member countries, including ones not shown here.

Data: OECD Health Statistics 2022.

Practicing physicians per 1,000 population



Notes: 2021 data for CAN, GER, NZ, NOR, SWIZ, and UK; 2020 data for AUS, FRA, JPN, KOR, and NETH; 2019 data for SWE and US. OECD average reflects the average of 31 OECD member countries, including ones not shown here.

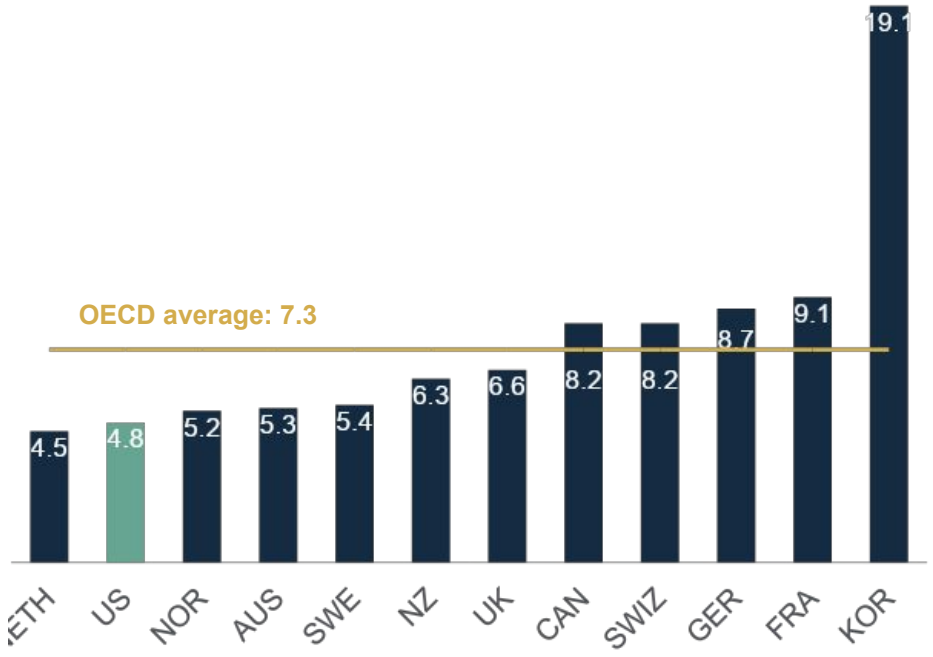
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Hospital stays are shortest in the Netherlands and the U.S. The U.S. has among the lowest number of hospital beds.

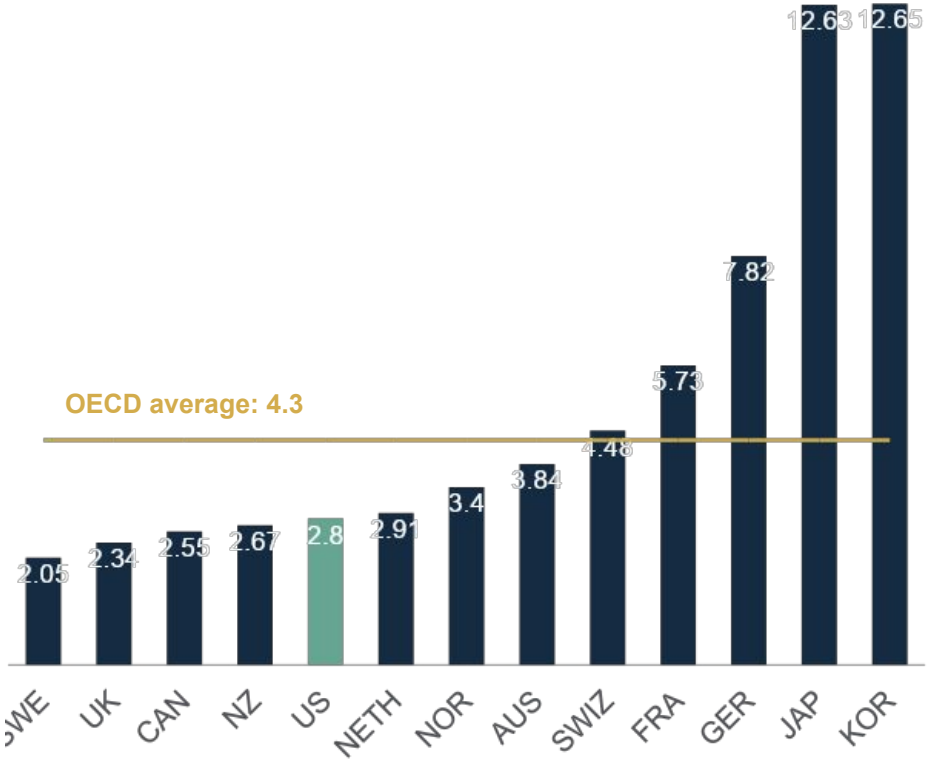
Average length of stay for inpatient care (days)



Notes: Data reflect average length of stay for inpatient care for all hospitals. 2021 data for NOR; 2020 data for CAN, FRA, GER, KOR, NETH, SWE, and SWIZ. 2019 data for AUS and NZ; 2018 data for UK; 2010 data for US. Data for JPN not available. OECD average reflects the average of 36 OECD member countries, including ones not shown here, where data are available.

Data: OECD Health Statistics 2022.

Number of total hospital beds per 1,000 population



Notes: 2021 data for NZ and UK; 2020 data for CAN, FRA, GER, JPN, KOR, NETH, NOR, SWE, and SWIZ; 2019 data for US; 2016 data for AUS. OECD average reflects the average of 38 OECD member countries, including ones not shown here, with available data.

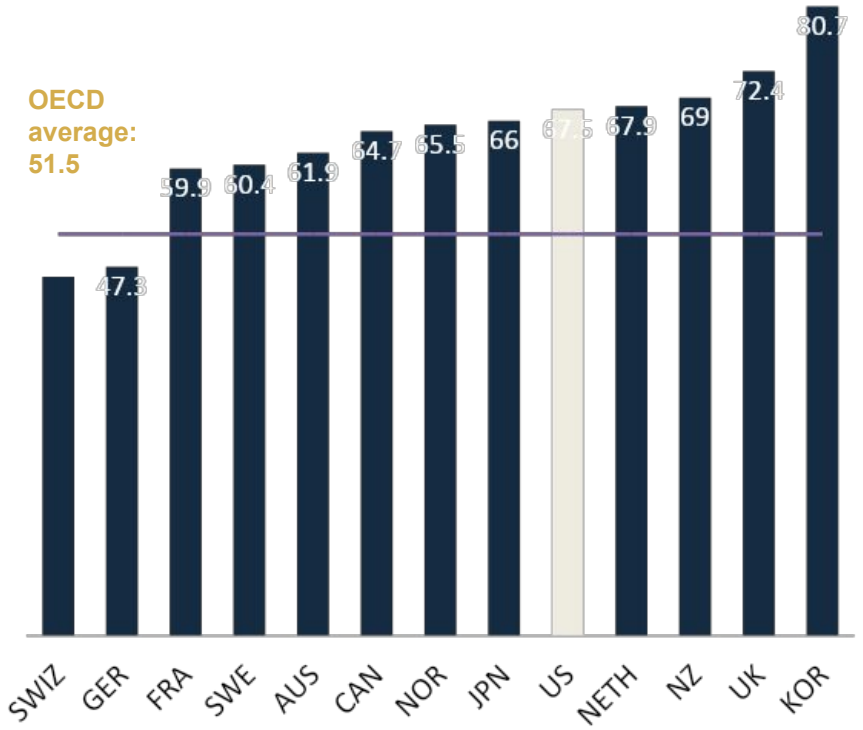
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. has a higher influenza vaccination rate compared to the OECD average, but its COVID-19 vaccination rate is still lower than that of many peer nations.

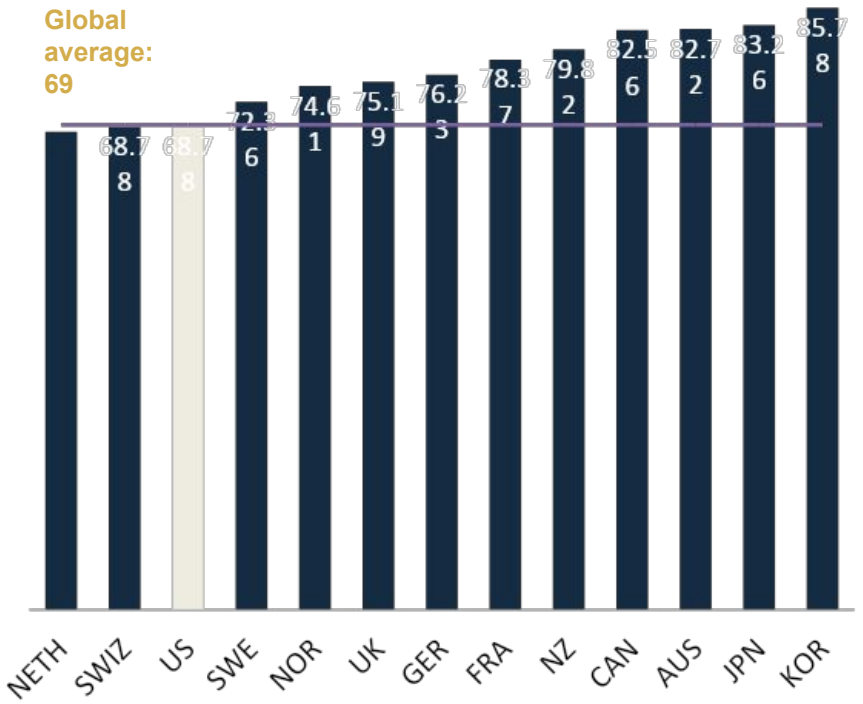
Percent of adults age 65 and older immunized for influenza



Notes: Flu immunization rates reflect age-standardized rates. 2021 data for AUS, NZ, and NOR; 2020 data for CAN, FRA, GER, JPN, KOR, NETH, SWE, UK, and US; 2010 data for SWIZ. OECD average reflects the average of 37 OECD member countries, including ones not shown here, where data are available.

Data: OECD Health Statistics 2022.

Percent of population fully vaccinated for COVID-19



Notes: Total number of people who are fully vaccinated, relative to the total population. Available data as of January 18, 2023.

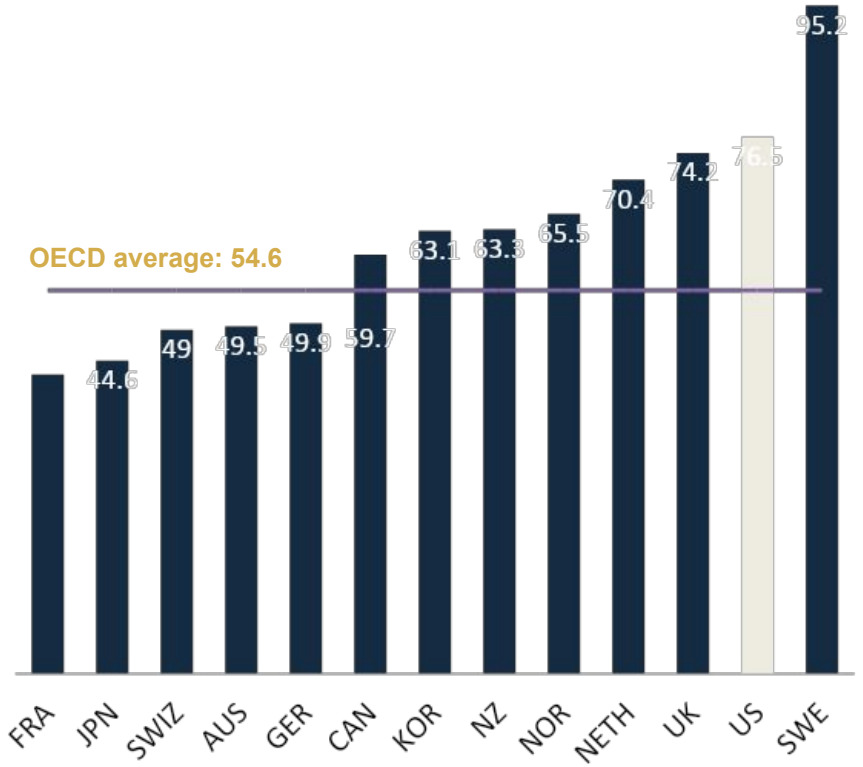
Data: Our World in Data 2023.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. has among the highest rates of screening for breast and colorectal cancers.

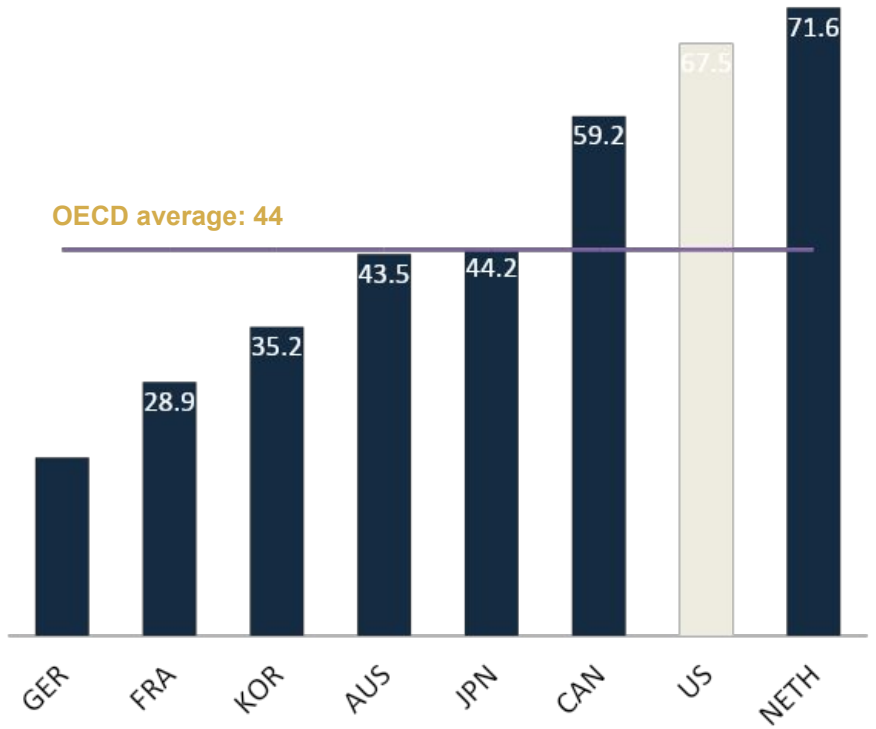
Percent of females ages 50–69 screened for breast cancer



Notes: 2021 data for NZ and NOR; 2020 data for AUS, FRA, KOR, NETH, and UK; 2019 data for CAN, GER, JPN, SWE, and US; 2017 data for SWIZ. Programmatic data for all countries except survey data for JPN, SWE, SWIZ, and US. OECD average reflects the average of 27 OECD member countries, including ones not shown here, who provide breast cancer program data.

Data: OECD Health Statistics 2022.

Percent of population ages 50–74 screened for colorectal cancer



Notes: 2020 data for FRA, KOR, and NETH; 2019 data for AUS, CAN, JPN, and US; 2018 data for GER. Programmatic data for all countries except survey data for JPN and US. OECD average reflects the average of 17 OECD member countries, including ones not shown here, who provide colorectal cancer program data. Data not available for NOR, NZ, SWE, SWIZ, and UK.

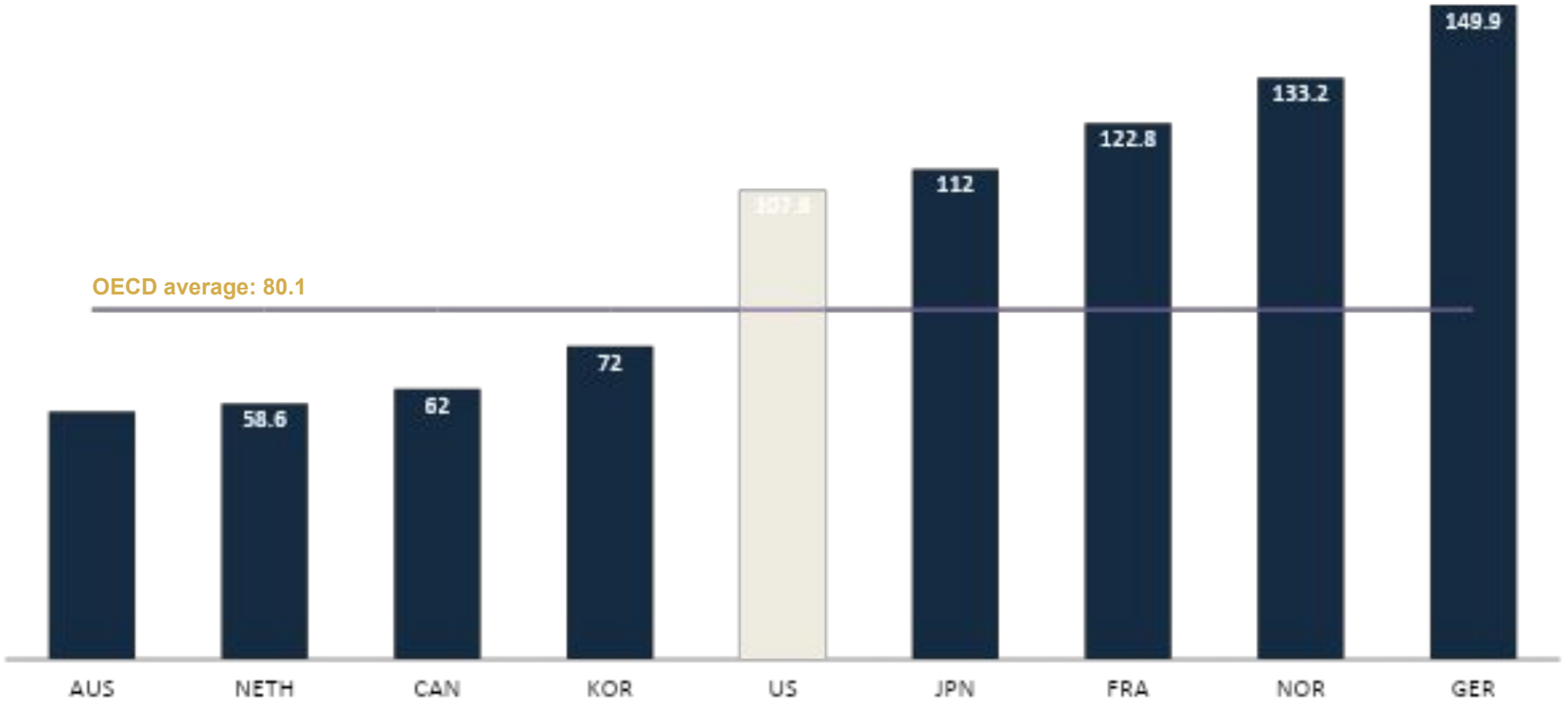
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

MRIs are most common in Norway and Germany; the U.S. performs MRIs more frequently compared to the OECD average.

Magnetic resonance imaging (MRI) scans per 1,000 population



Notes: 2021 data for AUS, NOR, and US; 2020 data for GER, KOR, and NETH; 2019 data for CAN and FRA; 2014 data for JPN. OECD average reflects the average of 28 OECD member countries, including ones not shown here, which provide data on MRI exam scans. Data not available for NZ, SWE, SWIZ, and UK.

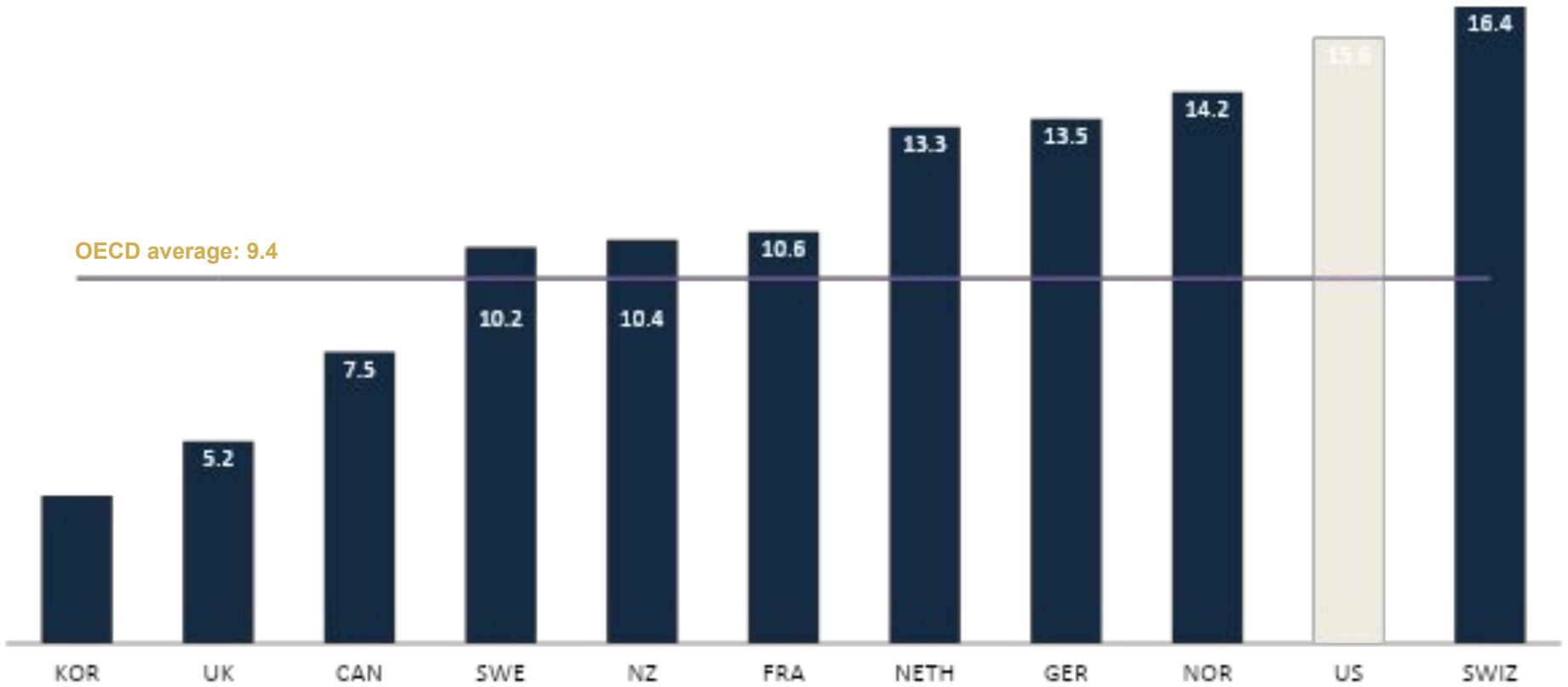
Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

The U.S. has among the highest rates of hip replacements, right behind Switzerland.

Inpatient hip replacement procedures per 1,000 population age 65 and older



Notes: 2021 data for NOR. 2020 data for CAN, FRA, GER, KOR, SWE, SWIZ, and UK; 2019 data for NETH and NZ; 2010 data for US. OECD average reflects the average of 32 OECD member countries, including ones not shown here, which provide data on hip replacement procedures. Data not available for AUS and JPN.

Data: OECD Health Statistics 2022.

The Commonwealth Fund

Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejy-yc74

Inefficient Healthcare

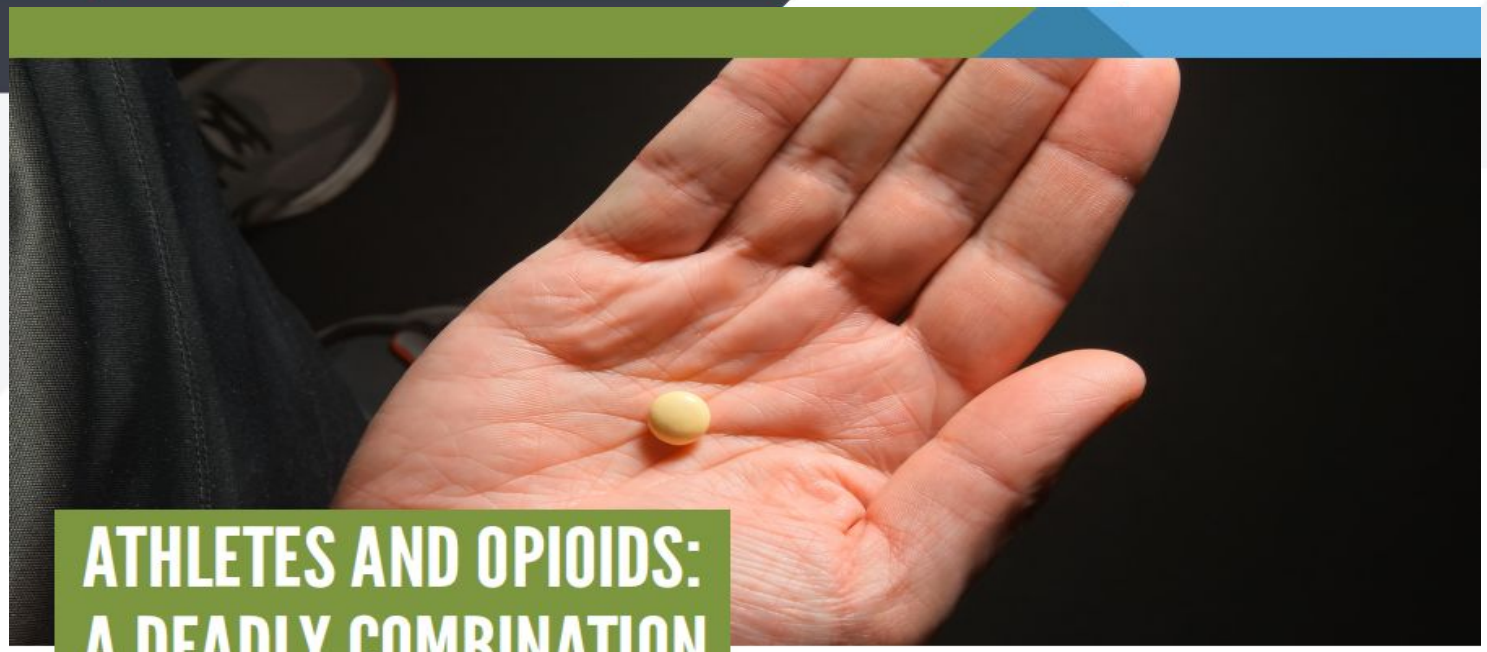
- U.S. health care spending grew 4.1% to $4.5 trillion
- This equates to $13,493 per person per year
- 18.3% of the US economy is devoted to healthcare spending

Medical Errors

11% of deaths are attributed to medical errors

Medical Errors

- Preventable
  - $17.1 Billion
- Medicine
  - $40 Billion
- Estimated Total Social Cost
  - $950 Billion

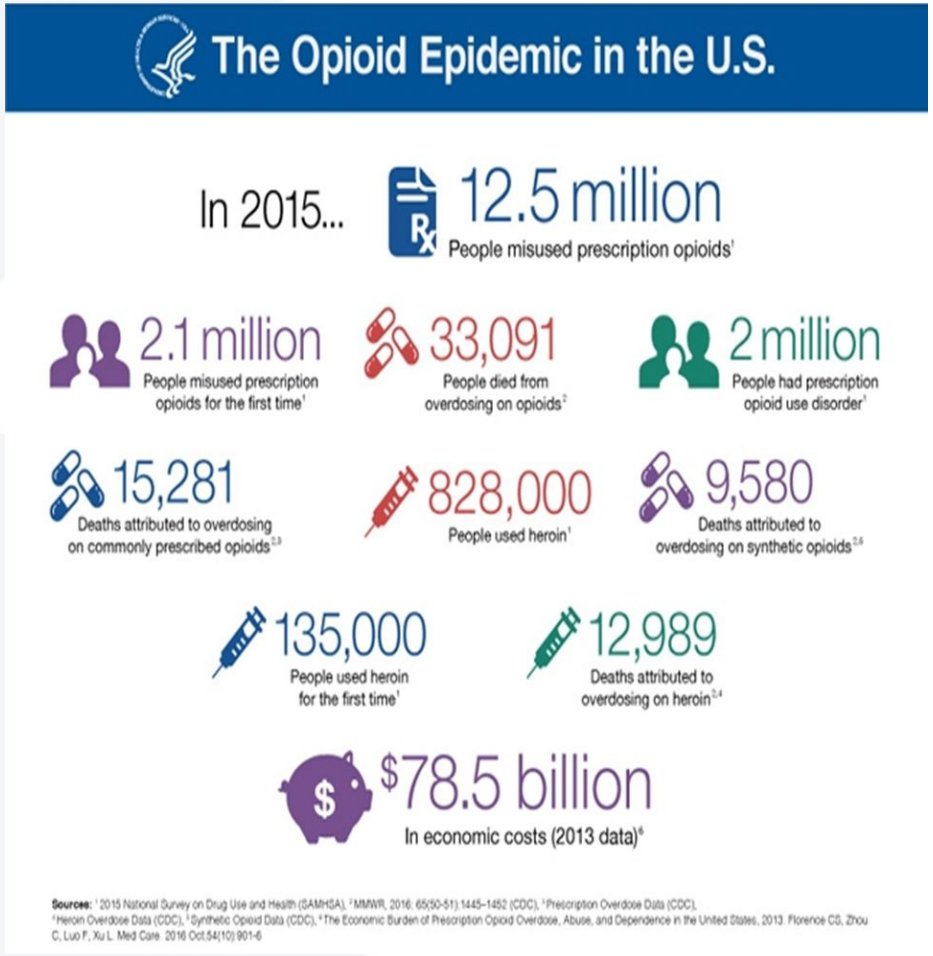


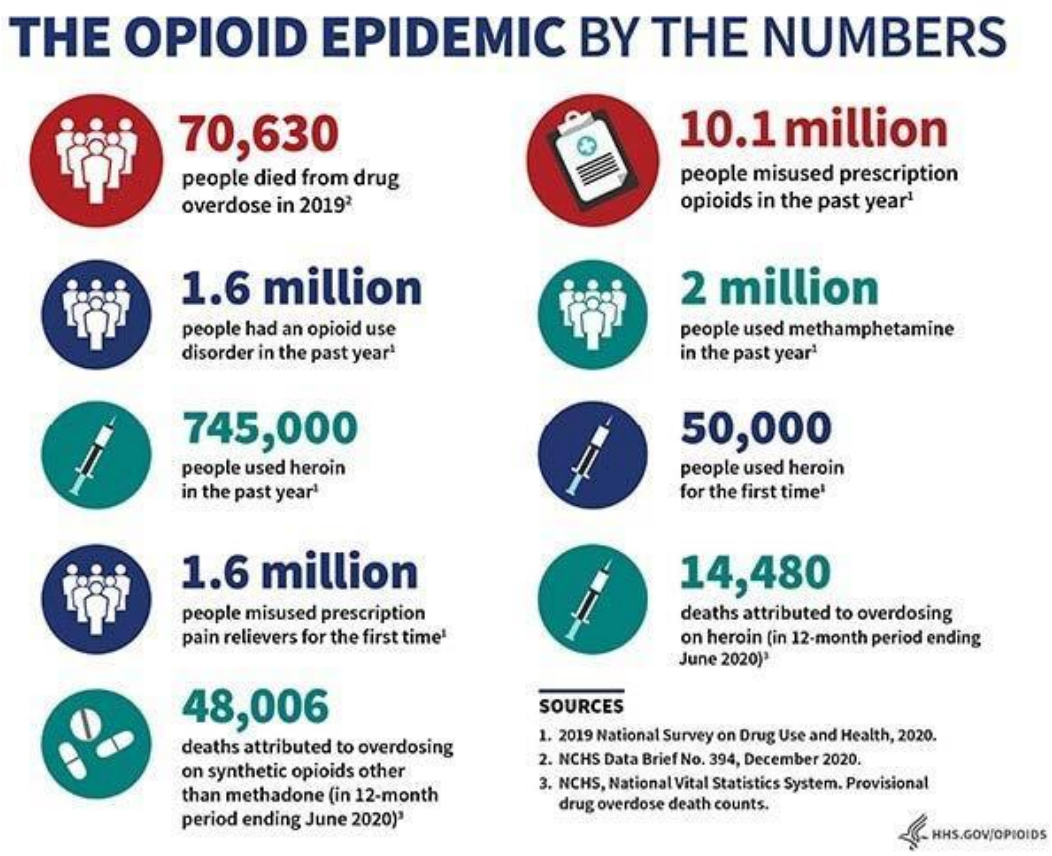
ATHLETES AND OPIOIDS: A DEADLY COMBINATION

In 2017, an estimated 11.4 million people misused opioids in the past year, including 214,000 adolescents aged 12 to 17 and another 634,000 young adults aged 18 to 25.[1] Opioids often offer rapid pain relief, which means athletes can return to play sooner, even if the injury has not safely healed.

This sets up a cycle of aggravating the injury, obtaining more opioids, continuing to compete and eventually leading to further abuse, loss of control and addiction. This cycle of addiction is created by changes produced in brain chemistry from substance abuse, according to Lakeview Health, an addiction rehabilitation organization in Texas and Florida.[2] The cycle is perpetuated by physiological, psychological and emotional dependency and typically continues unrestrained until some type of intervention occurs.

Preceding the addiction cycle is often the pain cycle. In this cycle, physical pain leads to avoidance behaviors and decreased mobility, which can cause emotional responses such as altered functional status, diminished self-efficacy and social limitations.[3] The emotional aspect contributes to even greater physical pain and the cycle starts over. To avoid both the physical and emotional pain, athletes can become dependent on opioids.


The Opioid Epidemic in the U.S.
In 2015...
12.5 million
People misused prescription opioids[1]
2.1 million
People misused prescription opioids for the first time[1]
33,091
People died from overdosing on opioids[2]
2 million
People had prescription opioid use disorder[1]
15,281
Deaths attributed to overdosing on commonly prescribed opioids[2,3]
828,000
People used heroin[1]
9,580
Deaths attributed to overdosing on synthetic opioids[2,6]
135,000
People used heroin for the first time[1]
12,989
Deaths attributed to overdosing on heroin[2,4]
$78.5 billion
In economic costs (2013 data)[5]
Sources: [1] 2015 National Survey on Drug Use and Health (SAMHSA), [2] MMWR. 2016; 65(50-51):1445–1452 (CDC), [3] Prescription Overdose Data (CDC), [4] Heroin Overdose Data (CDC), [5] Synthetic Opioid Data (CDC), [6] The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013. Florence CS, Zhou C, Luo F, Xu L. Med Care. 2016 Oct;54(10):901-6

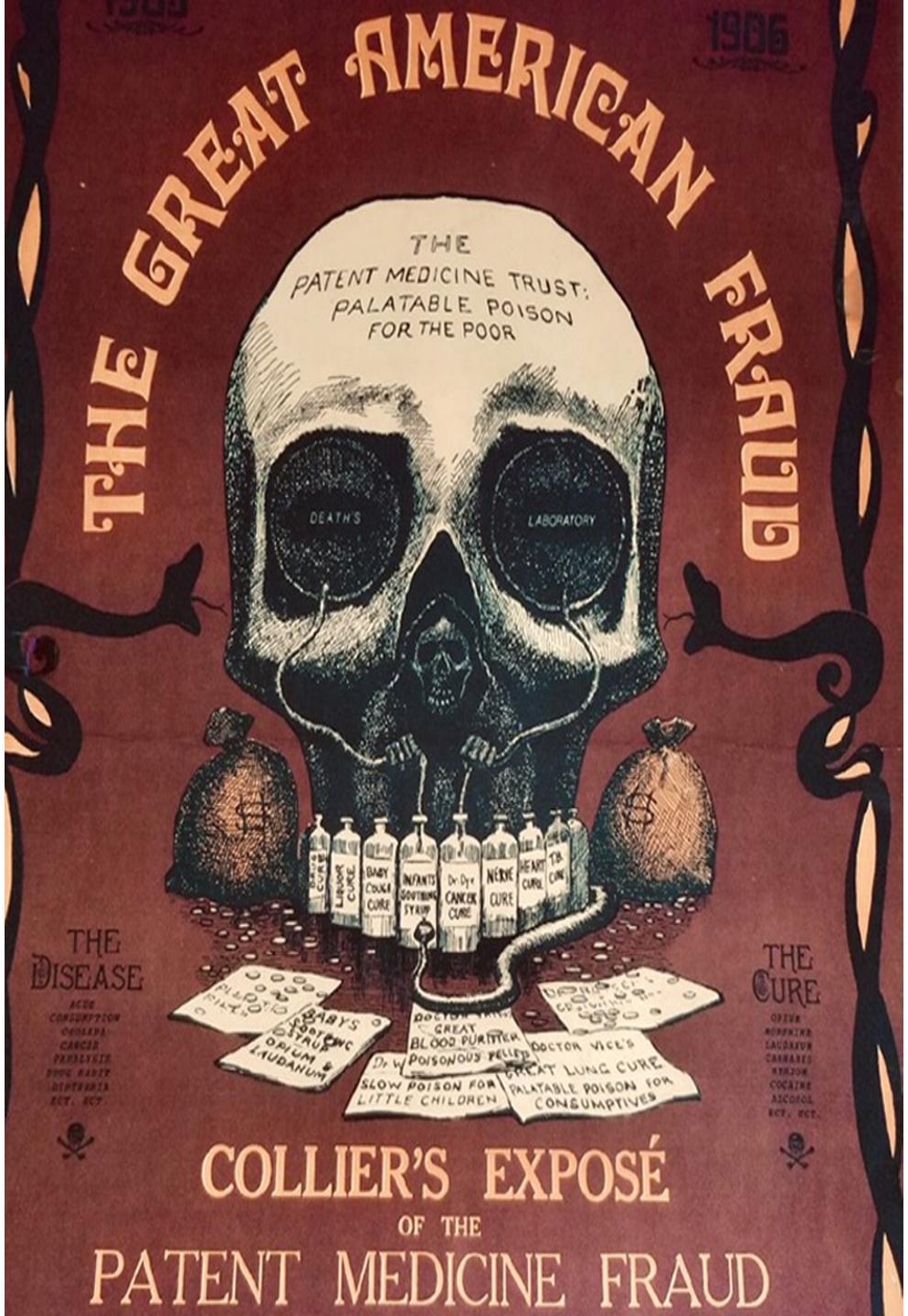

THE OPIOID EPIDEMIC BY THE NUMBERS
70,630
people died from drug overdose in 2019[2]
10.1 million
people misused prescription opioids in the past year[1]
1.6 million
people had an opioid use disorder in the past year[1]
2 million
people used methamphetamine in the past year[1]
745,000
people used heroin in the past year[1]
50,000
people used heroin for the first time[1]
1.6 million
people misused prescription pain relievers for the first time[1]
14,480
deaths attributed to overdosing on heroin (in 12-month period ending June 2020)[3]
48,006
deaths attributed to overdosing on synthetic opioids other than methadone (in 12-month period ending June 2020)[3]
SOURCES
1. 2019 National Survey on Drug Use and Health, 2020.
2. NCHS Data Brief No. 394, December 2020.
3. NCHS, National Vital Statistics System. Provisional drug overdose death counts.
HHS.GOV/OPIOIDS

HEROIN

Diacetylmorphine, commonly known as heroin, was first discovered by a British chemist in 1874 by combining morphine with acetic anhydride. In 1898, the Bayer Company of Elberfeld, Germany began to mass produce and market heroin as a painkiller, cough suppressant and diarrhea treatment; one possibility for the name *heroin* was that the drug gave its users a "heroic" feeling and it was thought to be a "heroic" and powerful new drug.

First approved by the American Medical Association in 1906, heroin was administered by injection as a painkiller and was believed to be a non-addictive substitute for morphine. Patent medicine manufacturers included heroin in cure-all tonics, painkillers and cough medicines.

The passage of the 1914 Harrison Act required a physician's prescription to obtain narcotics, although the law was sporadically enforced until the Narcotics Division of the Treasury Department began a crackdown in 1923. The Federal Bureau of Narcotics, the precursor to the modern Drug Enforcement Administration (DEA), tightened restrictions in 1930, resulting in the eventual criminalization of recreational narcotic use.


1905
1906
THE GREAT AMERICAN FRAUD
THE PATENT MEDICINE TRUST: PALATABLE POISON FOR THE POOR
DEATH'S LABORATORY
LIQUOR CURE
BABY COUGH CURE
INFANTS SOOTHING SYRUP
Dr Dye CANCER CURE
NERVE CURE
HEART CURE
TB CURE
THE DISEASE
ACNE CONSUMPTION CANCER
THE CURE
OPIUM MORPHINE LAUDANUM CANNABIS HEROIN COCAINE ALCOHOL
BABY'S SOOTHING SYRUP OPIUM & LAUDANUM
GREAT BLOOD PURIFIER POISONOUS PELLETS
SLOW POISON FOR LITTLE CHILDREN
DOCTOR VICE'S GREAT LUNG CURE PALATABLE POISON FOR CONSUMPTIVES
COLLIER'S EXPOSÉ
OF THE
PATENT MEDICINE FRAUD

A Destructive Reactive ADDICTIVE PATH

“Vitamin I”

Opioids

CORRELATION vs CAUSATION

- Do you perform sports physicals?
  - Athletic Heart Syndrome
    - Left ventricle hypertrophy
      - S3 gallop,which can be heard through a stethoscope.
      - rare extra heart sound that occurs soon after the normal two "lub-dub" heart sounds (S1 and S2).

Everyone is a “Crooked Man”

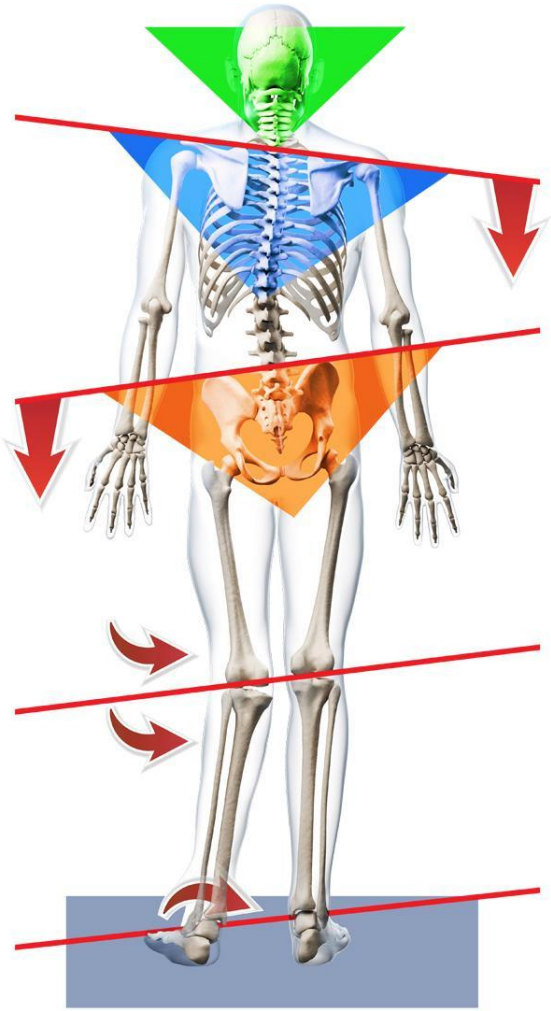
Orthotics

+ Simple

Structure-based Rehab

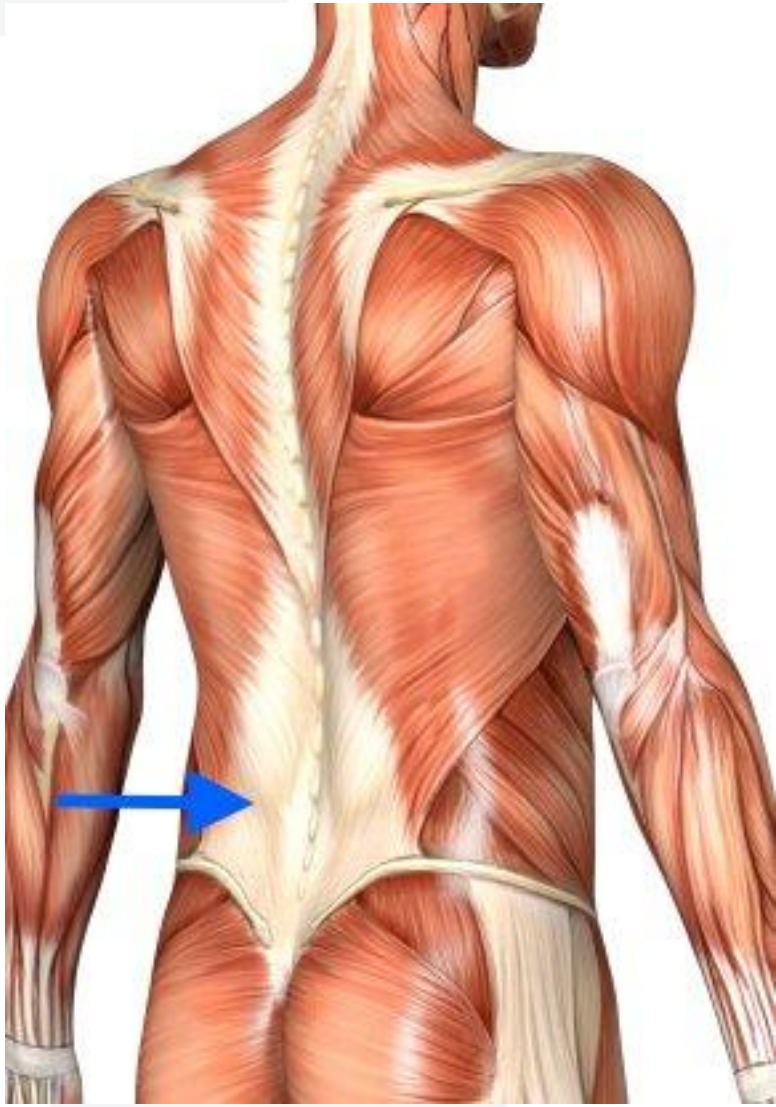
+ Chiropractic

= TRUE SUCCESS



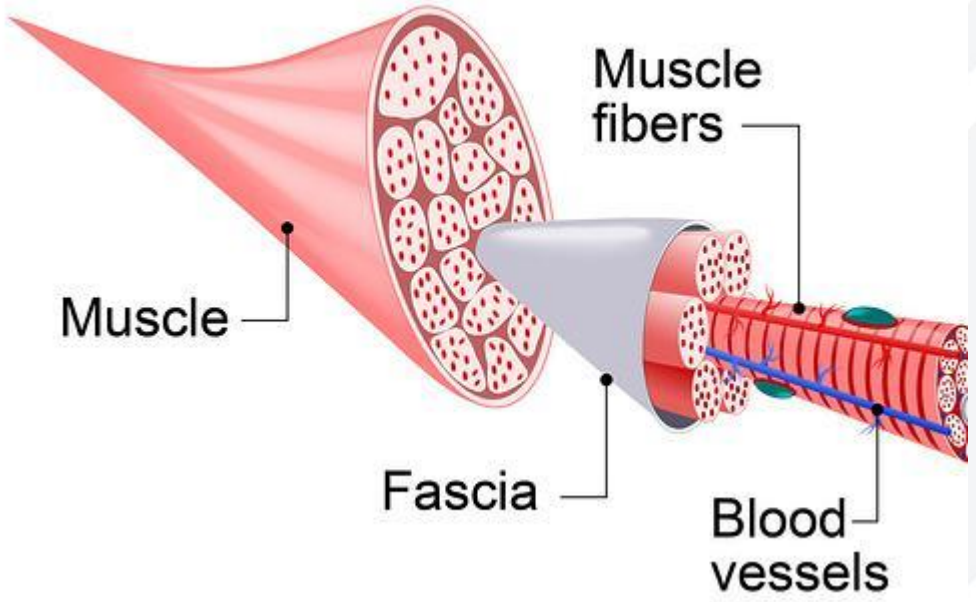
Fascia …. What is it?

- A biological fabric that surrounds every structure in the body and invests most of them



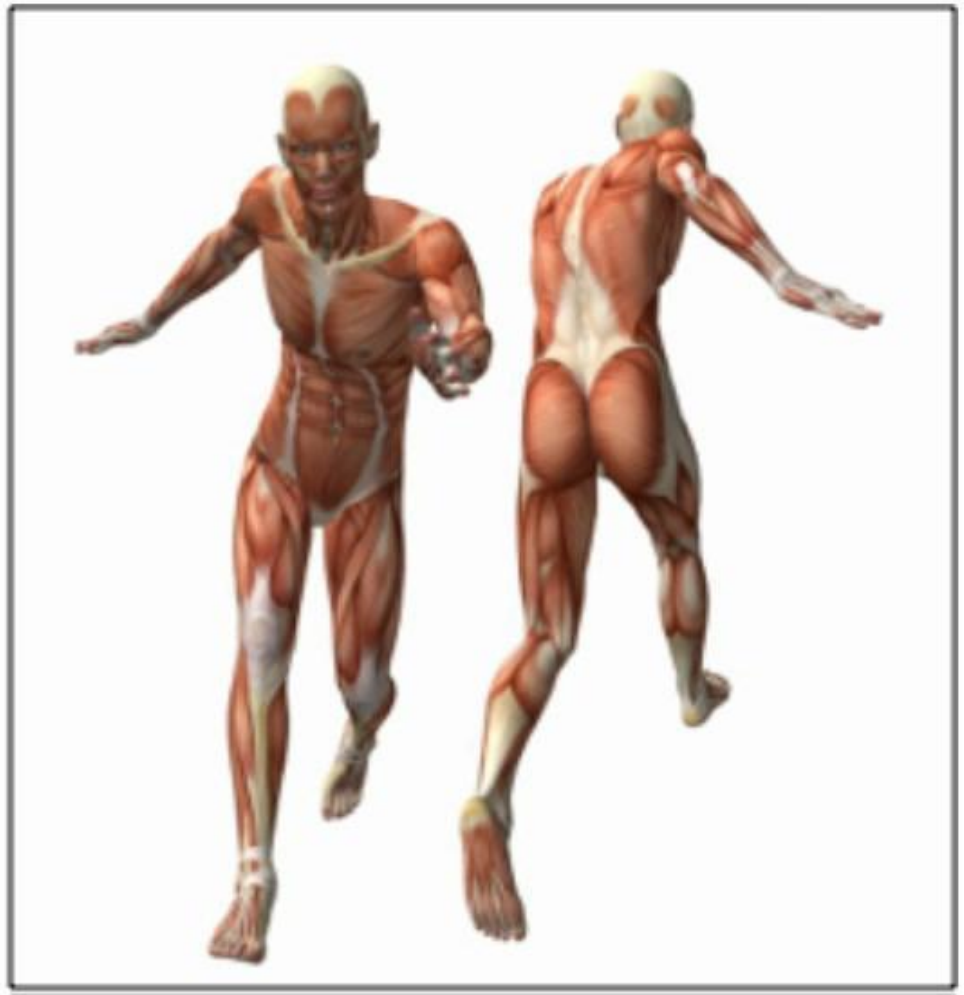
The Elementary View of Fascia

- Superficial - just below the skin
- Deep - surrounds muscles and bones
- Visceral - envelopes organs within their cavities



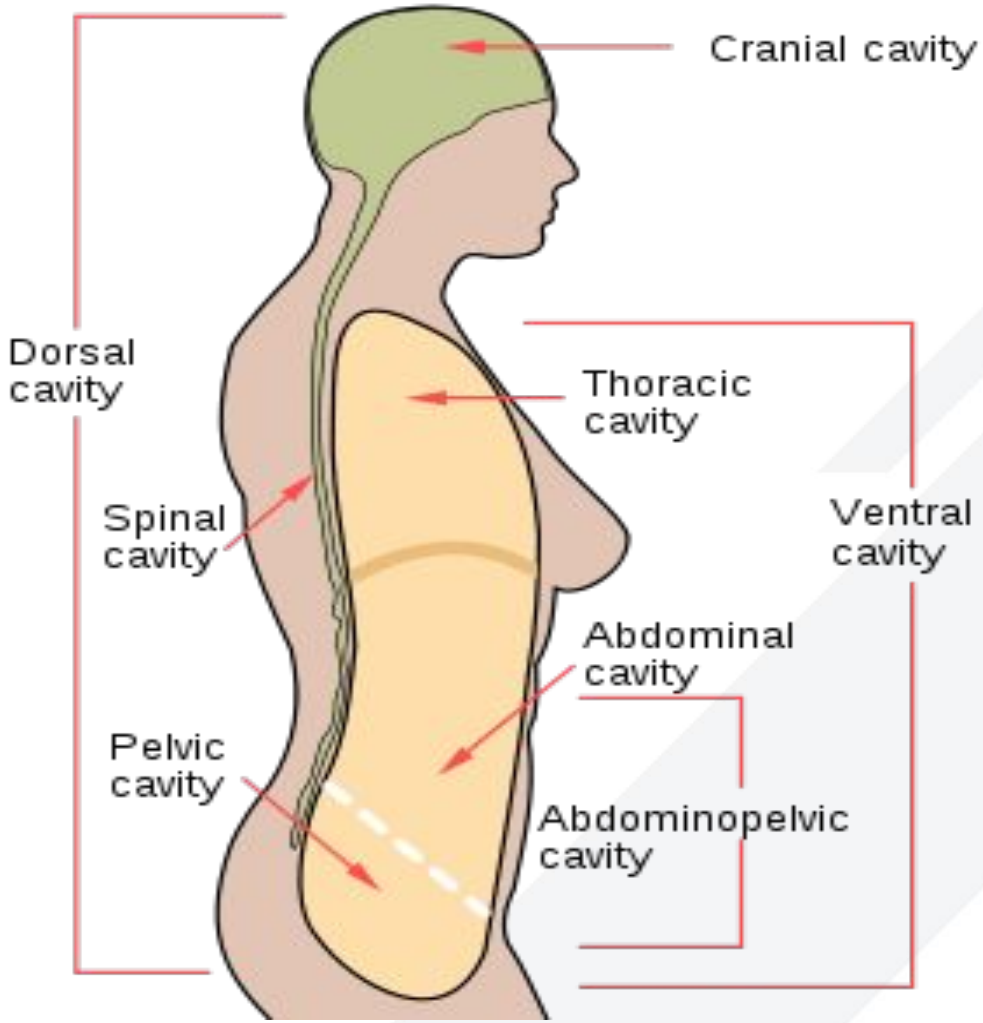
Fascia: The body suit

The fascia is a single **3 dimensional interdependent structure** covering and linking muscles, tendons and visceral organs together throughout the entire body.



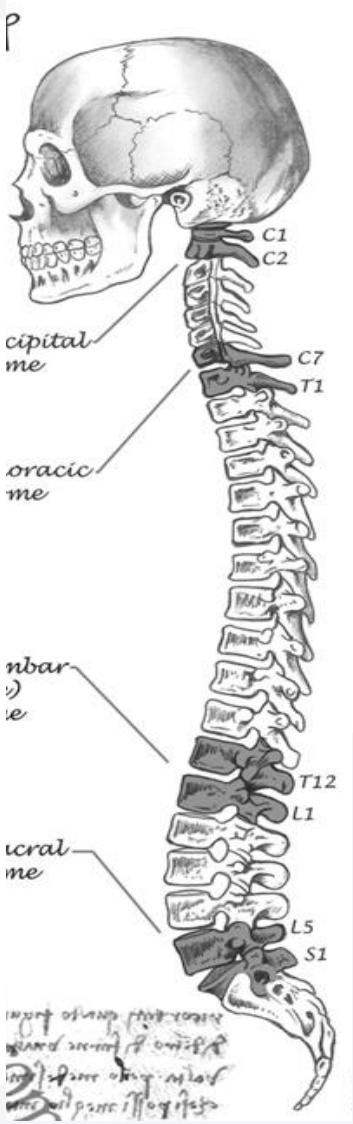
The 8 Transverse Diaphragms

- Plantar fascia
- Knee diaphragm
- Pelvic diaphragm
- Respiratory diaphragm
- Thoracic outlet
- Suboccipital triangle
- Tentorium cerebella
- Diaphragm sella



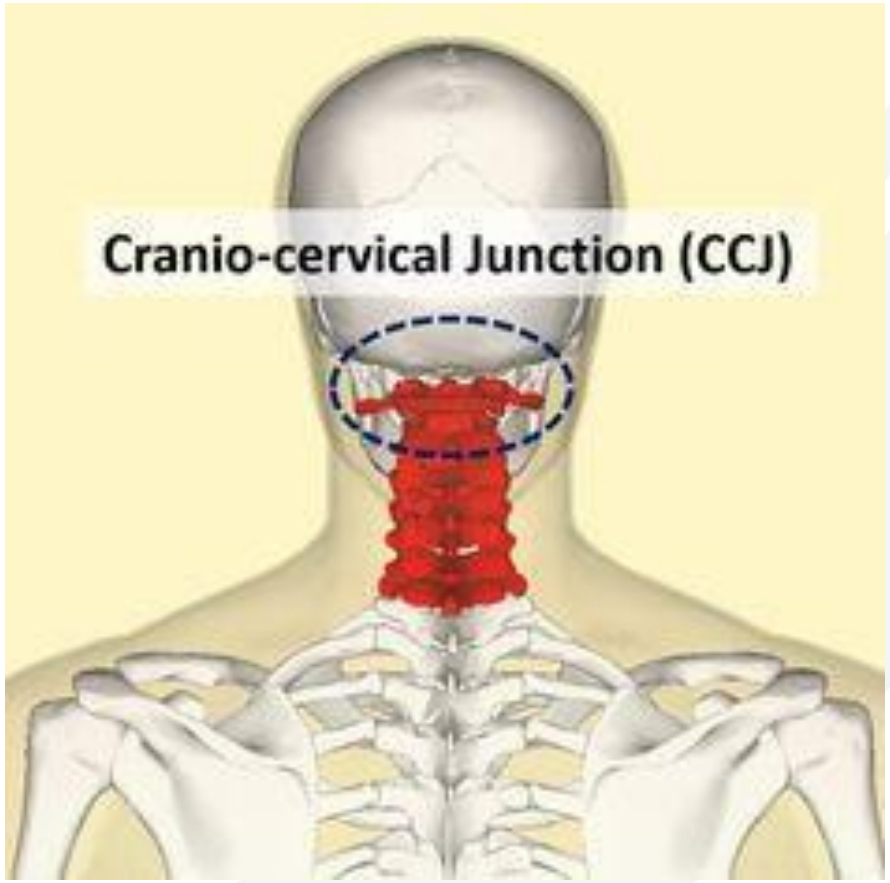
The Transverse Diaphragms of the Spine

- A membrane or flexible layer that separates one space from another
- From 8 to 5:
  - The four spinal transition zones
  - Plantar Aponeurosis



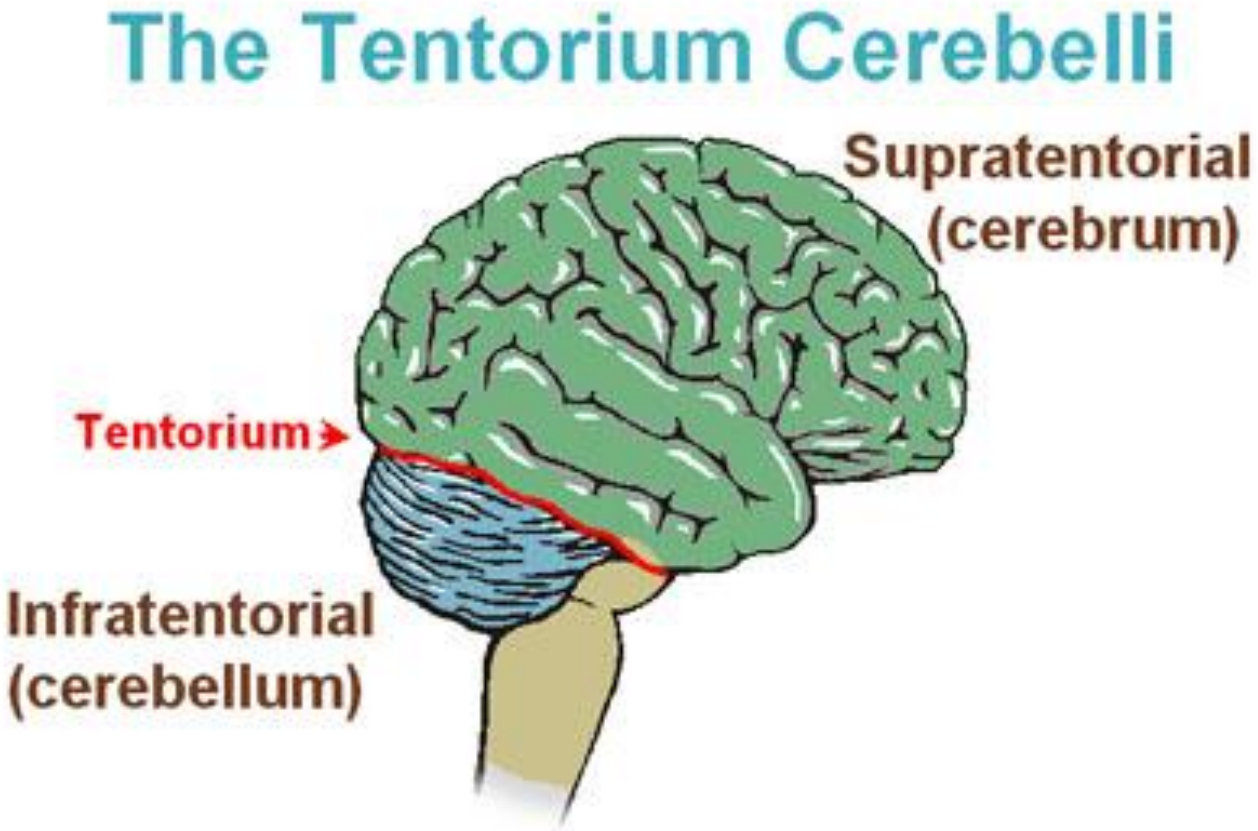
Cranio-cervical Junction (CCJ)

- Articulation between the occiput, atlas, and axis
- Extensive mobility - head balances on the cervical spine
- Site of the tonic neck reflexes, which influences postural muscular tone throughout the trunk
- Disturbed function creates hypertonus of the postural muscles, disturbances of equilibrium and locomotor deficits



Cranio-cervical Junction

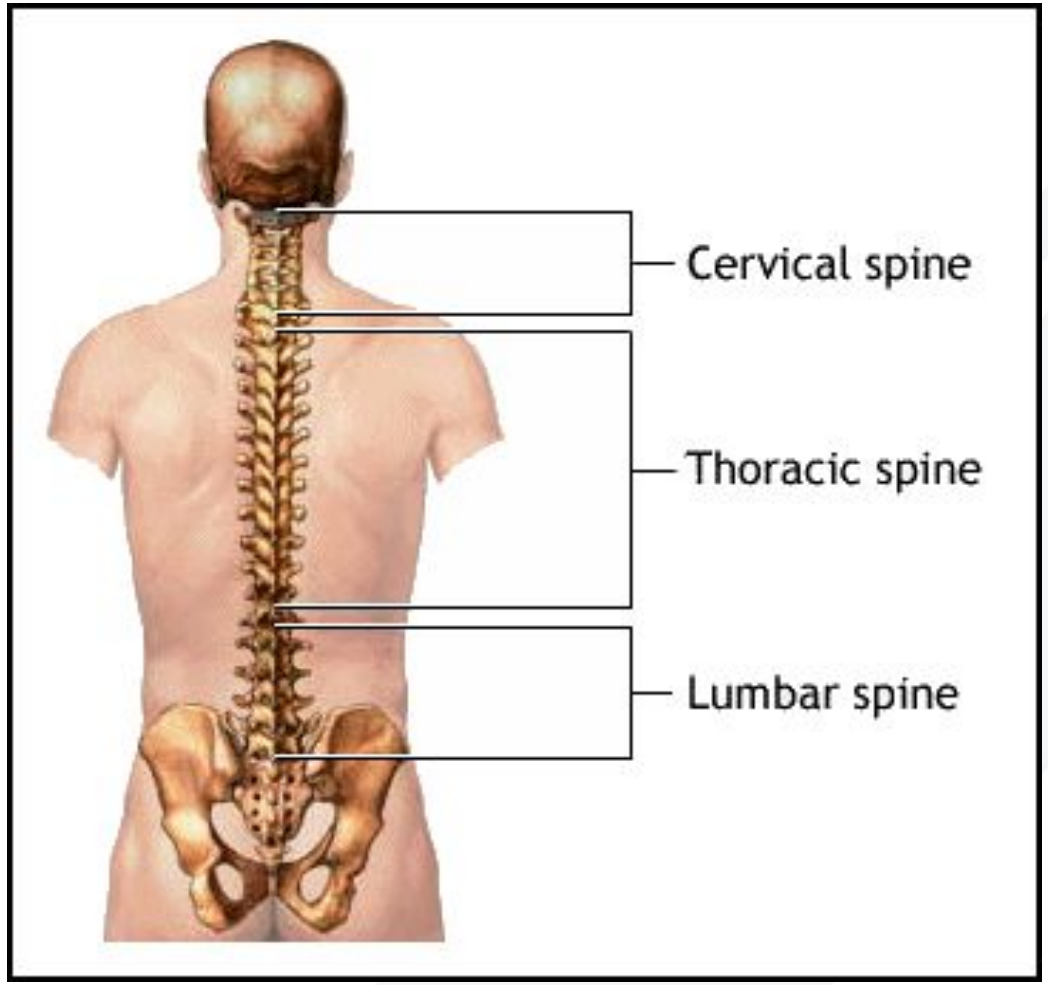
- Suboccipital triangle
- Tentorium cerebella
- Diaphragm sella



Cervicothoracic Junction

» Articulation between cervical and thoracic spine

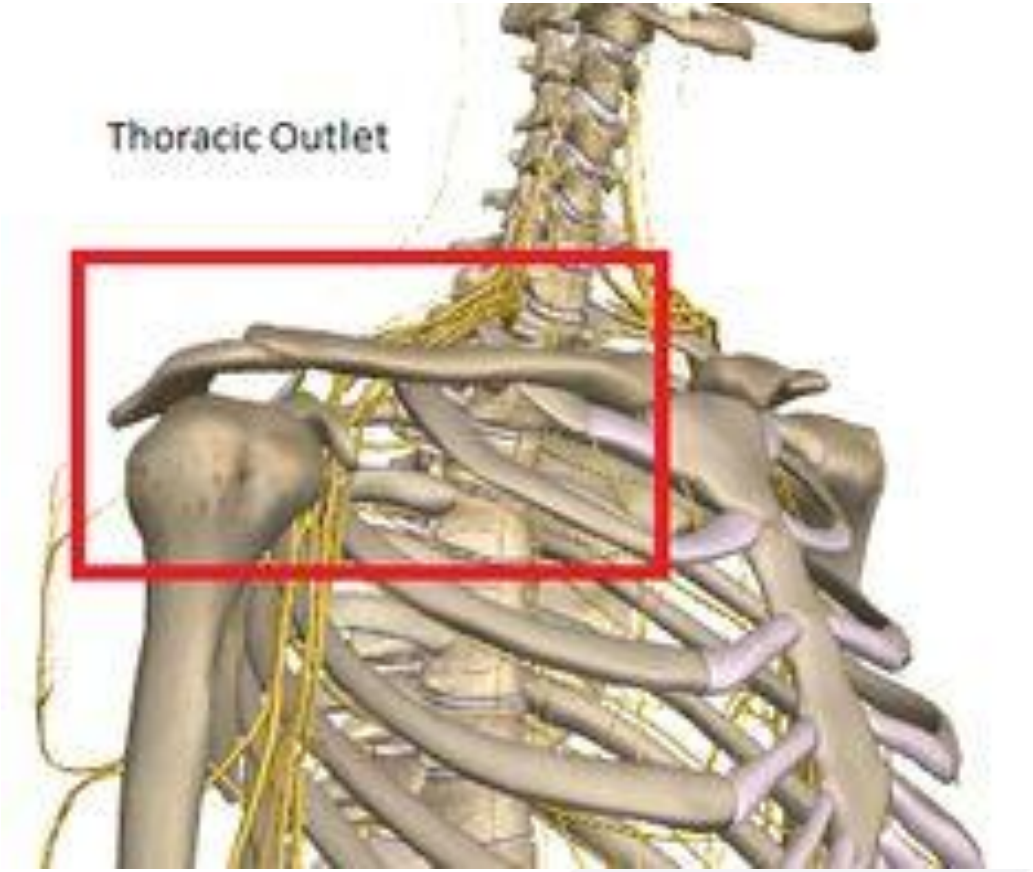
- Most mobile part of the spinal column is joined to the relatively rigid thoracic spine
- Anatomically, it is referred as the thoracic inlet and clinically, as the thoracic outlet



Cervicothoracic Junction

Thoracic outlet

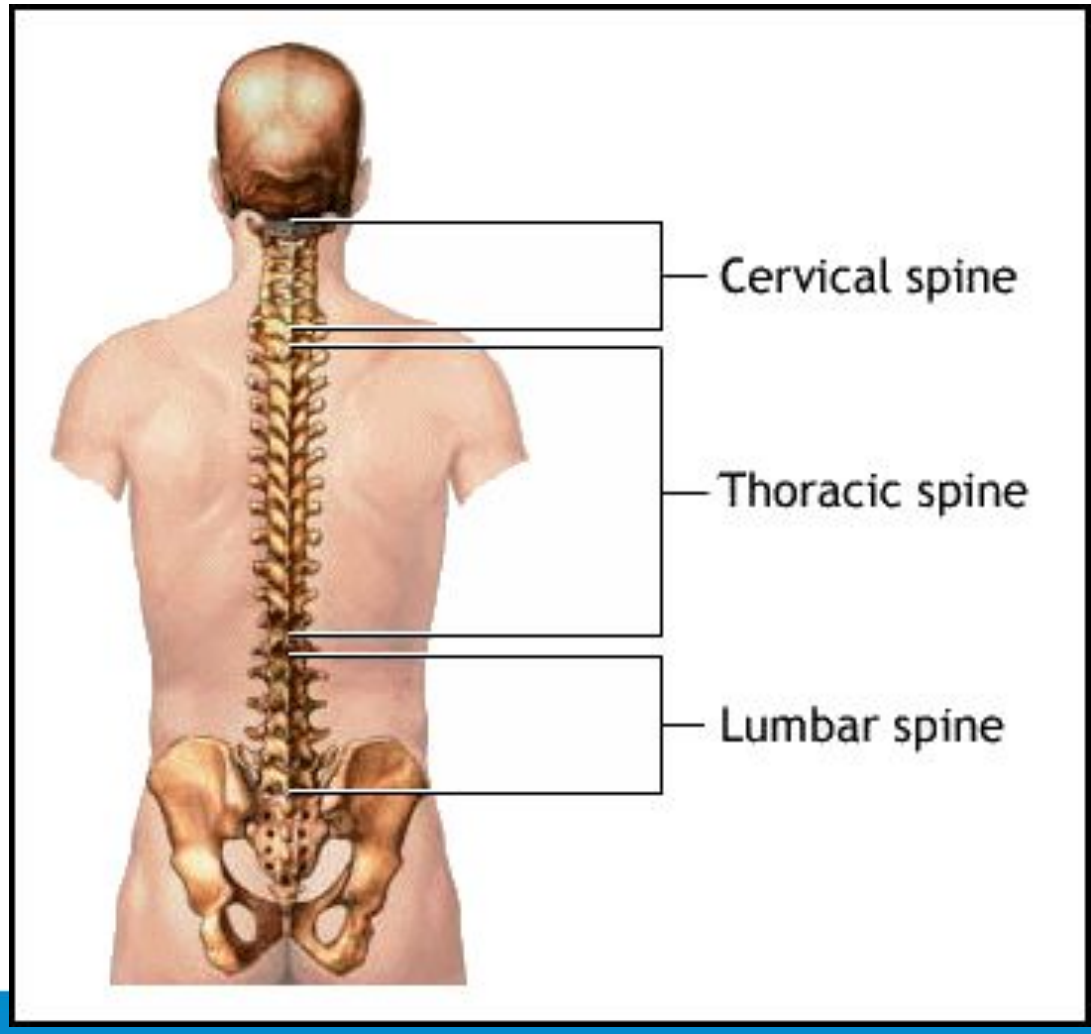
- Anterior cervical fascia
- Subclavius muscles
- Costocoracoid ligaments
- Costoclavicular ligaments



Thoracolumbar Junction

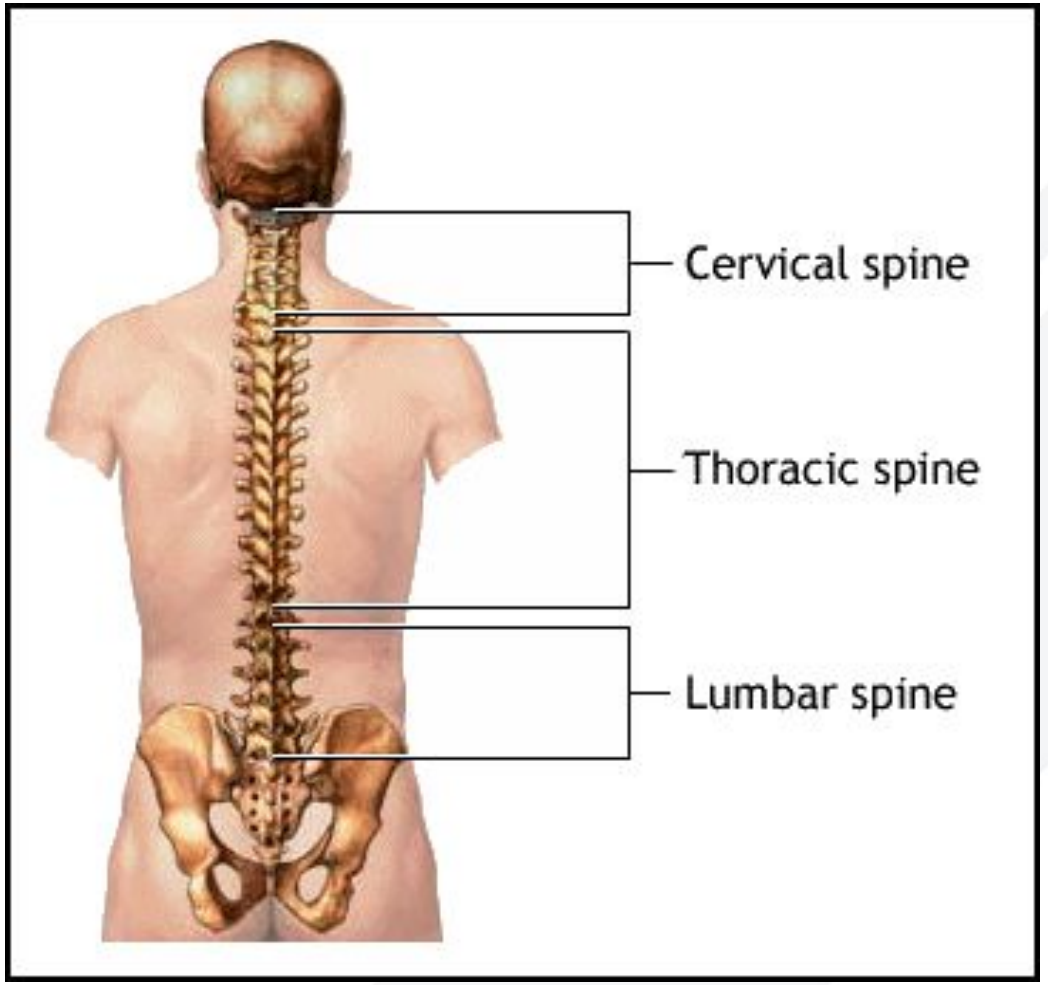
- Abrupt change in function from rotation to flexion

- Respiratory diaphragm



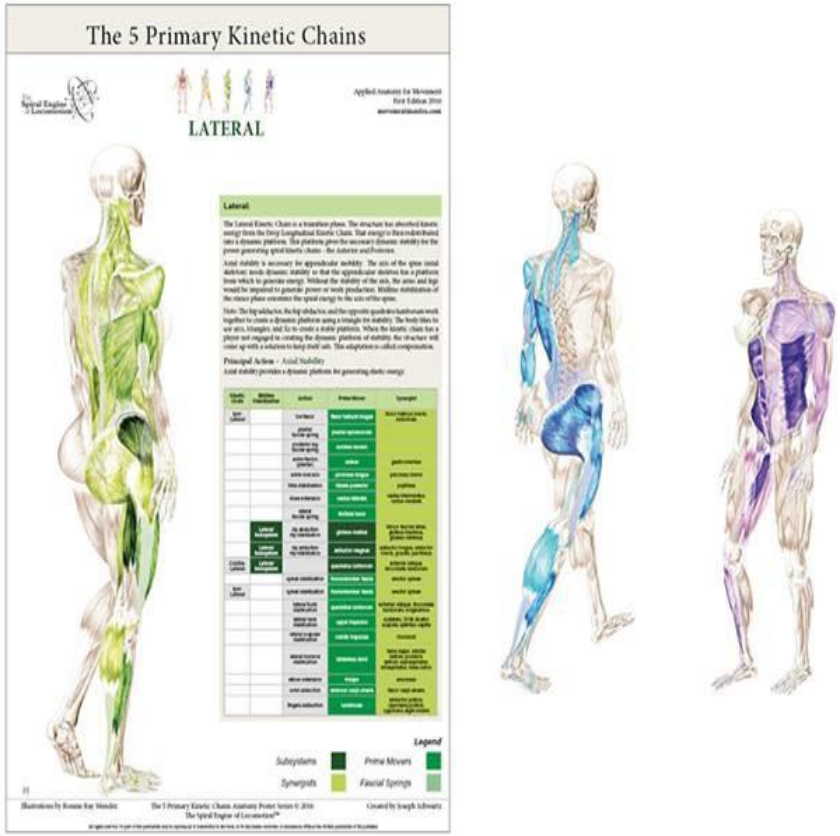
Lumbosacral Junction

- Forms base of axial skeleton therefore necessity for stabilization
- Movement of legs is directly translates through this junction
- Pelvic Diaphragm/Pelvic Floor



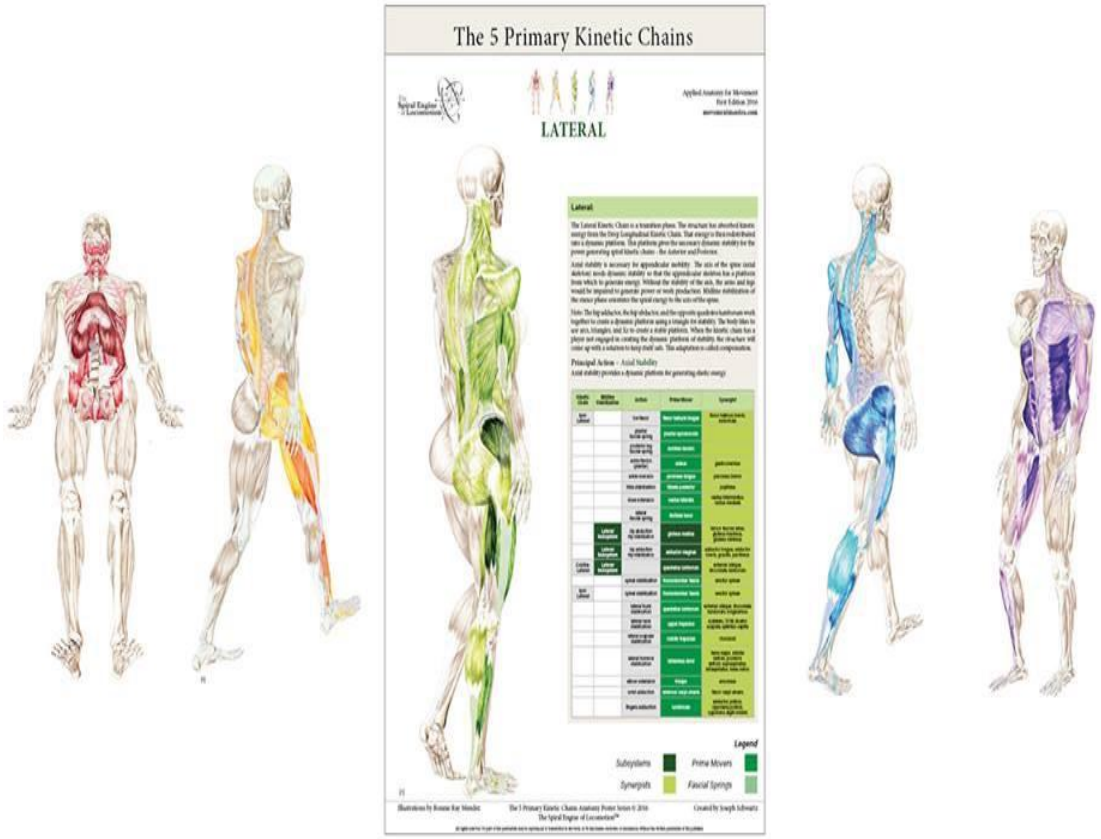
Five Primary Kinetic Chains

- Intrinsic
- Deep Longitudinal
- Lateral
- Posterior Spiral
- Anterior Spiral



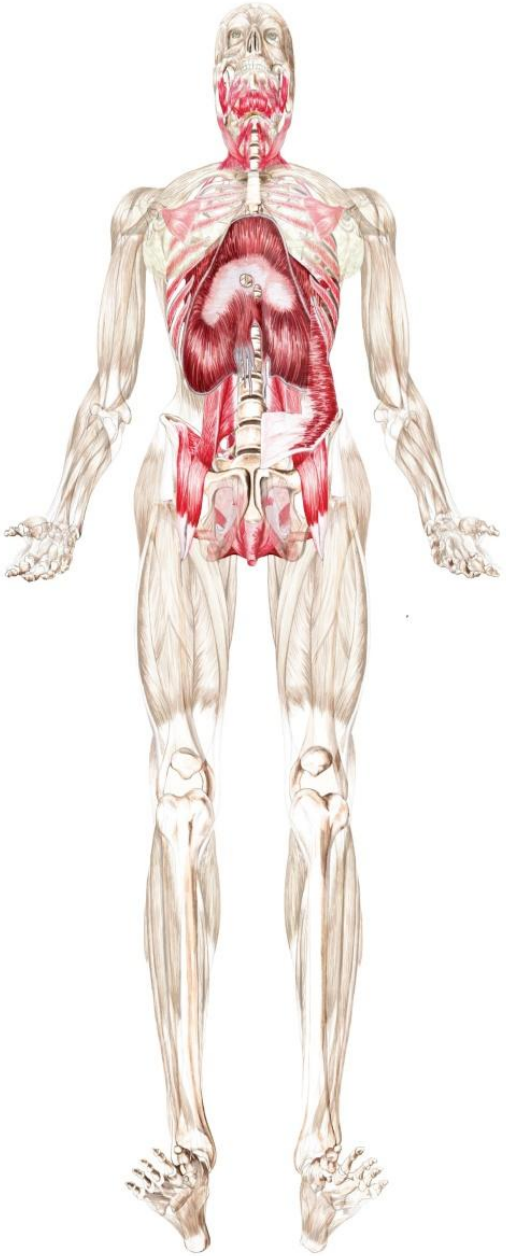
Five Primary Kinetic Chains

- Built on the principal actions that apply to all locomotion and movement
- Interdependent relationship that relies on the other to create balanced, efficient, reciprocal movement.
- One side of the body is active in one chain while the other side of the body is active in another

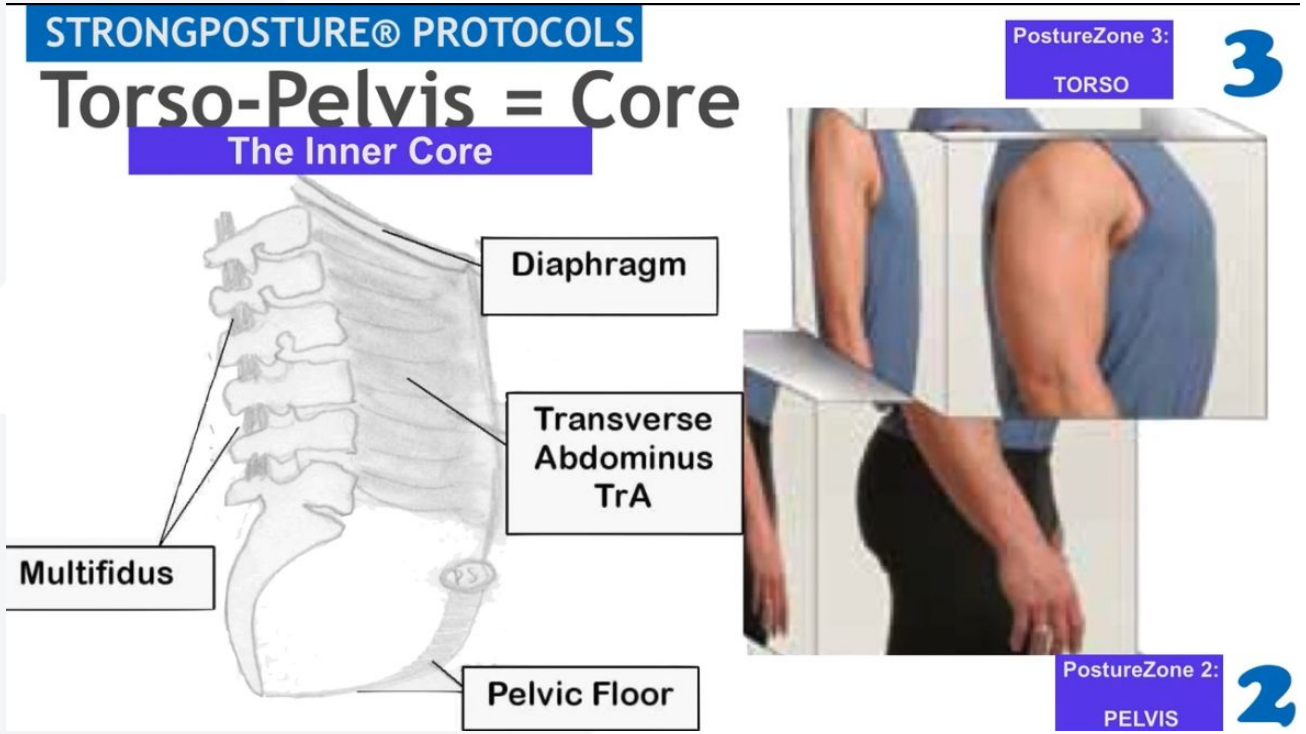


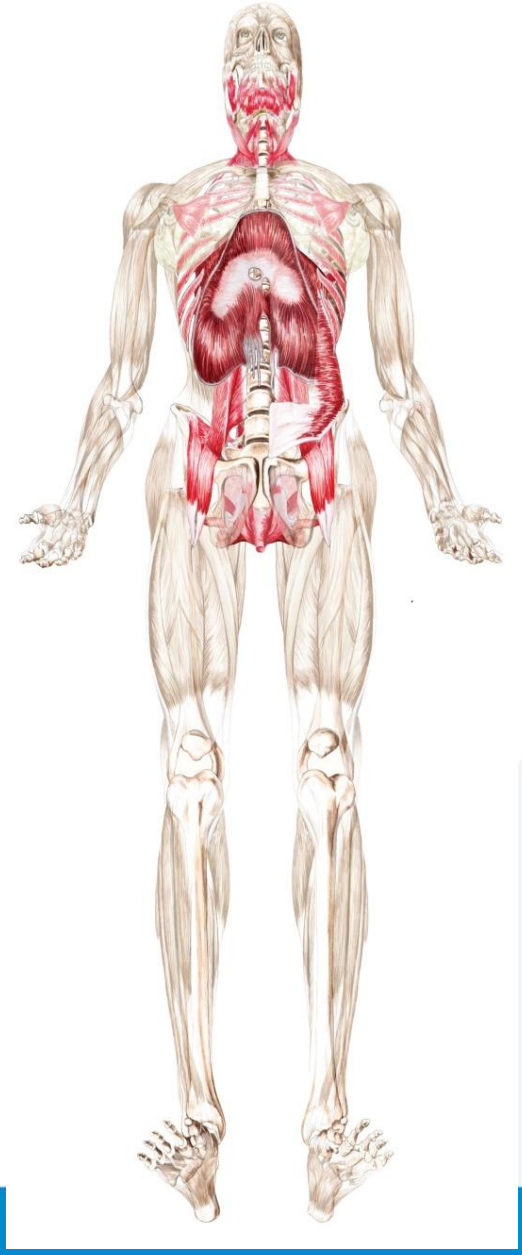
Intrinsic

Intrinsic	Function	Structure
	CSF Pump	Cranials
	Mastication, Speaking	Jaw
	Swallowing, Speaking	Throat
	Vestibular Orientation	Neck
	Axial Mobility	Spine
	Thoracic Stability	Rib Cage
Intrinsic Subsystem	Top of Core Cylinder, **Inhalation**	**Diaphragm**
Intrinsic Subsystem	Spinal Stabalizer, **Exhalation**	**Transverse Adbdominis**
	Lumbar Support	Pelvis
Intrinsic Subsystem	Spinal Stabalizer, **Inhalation**	**Multifidus**
Intrinsic Subsystem	Bottom of Core Cylinder, **Exhalation**	**Pelvic Floor**



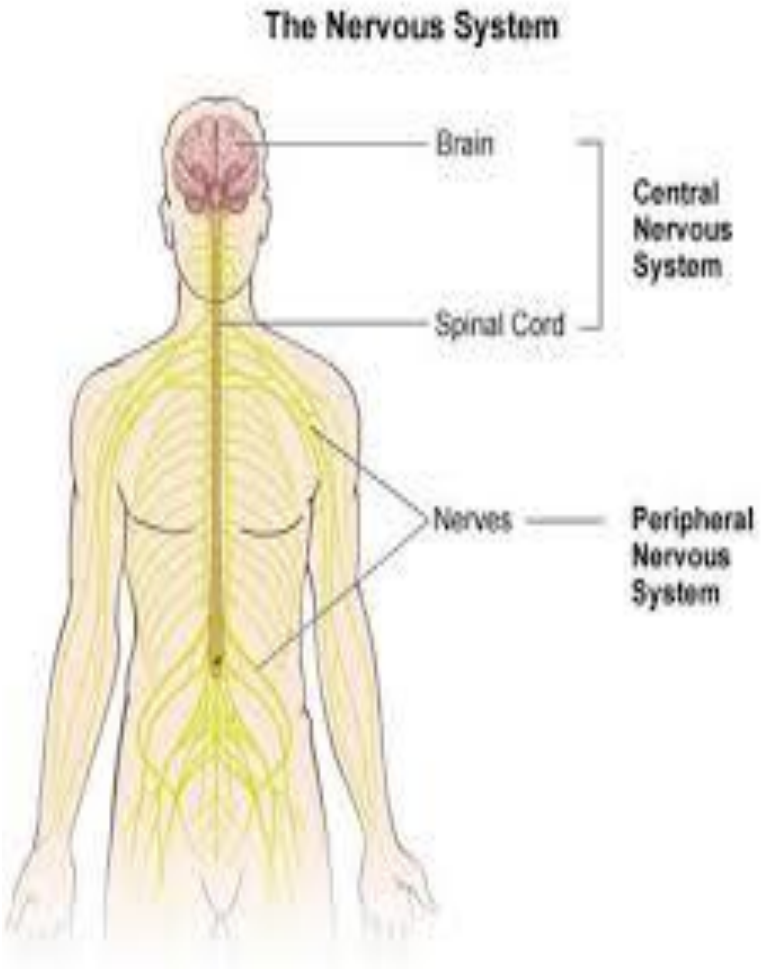
Intrinsic


STRONGPOSTURE® PROTOCOLS
Torso-Pelvis = Core
The Inner Core
Diaphragm
Transverse Abdominus TrA
Multifidus
Pelvic Floor
PostureZone 3: TORSO
3
PostureZone 2: PELVIS
2

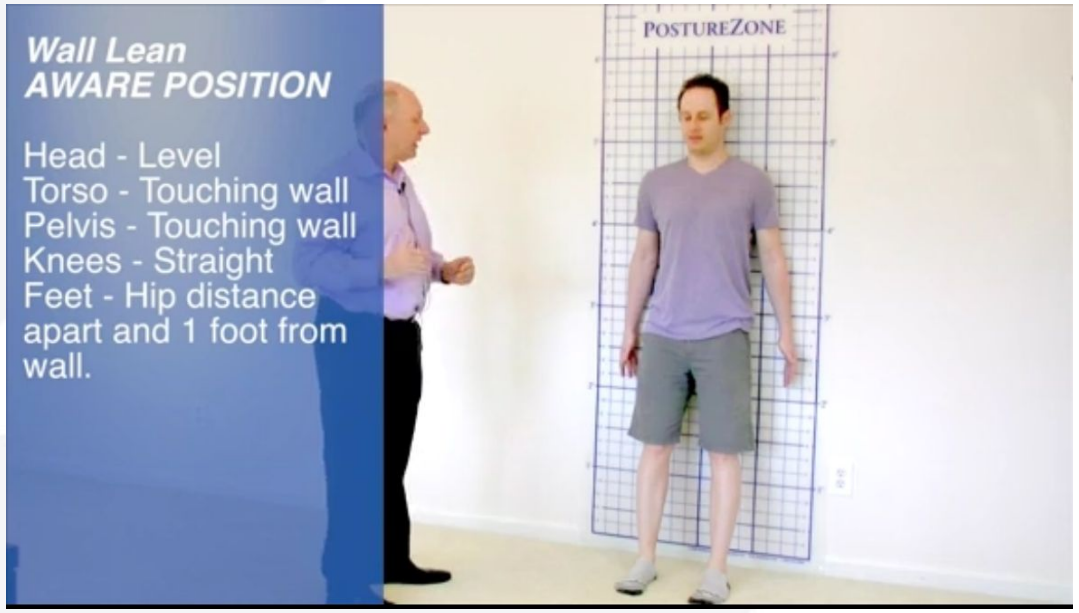


Intrinsic Kinetic Chain

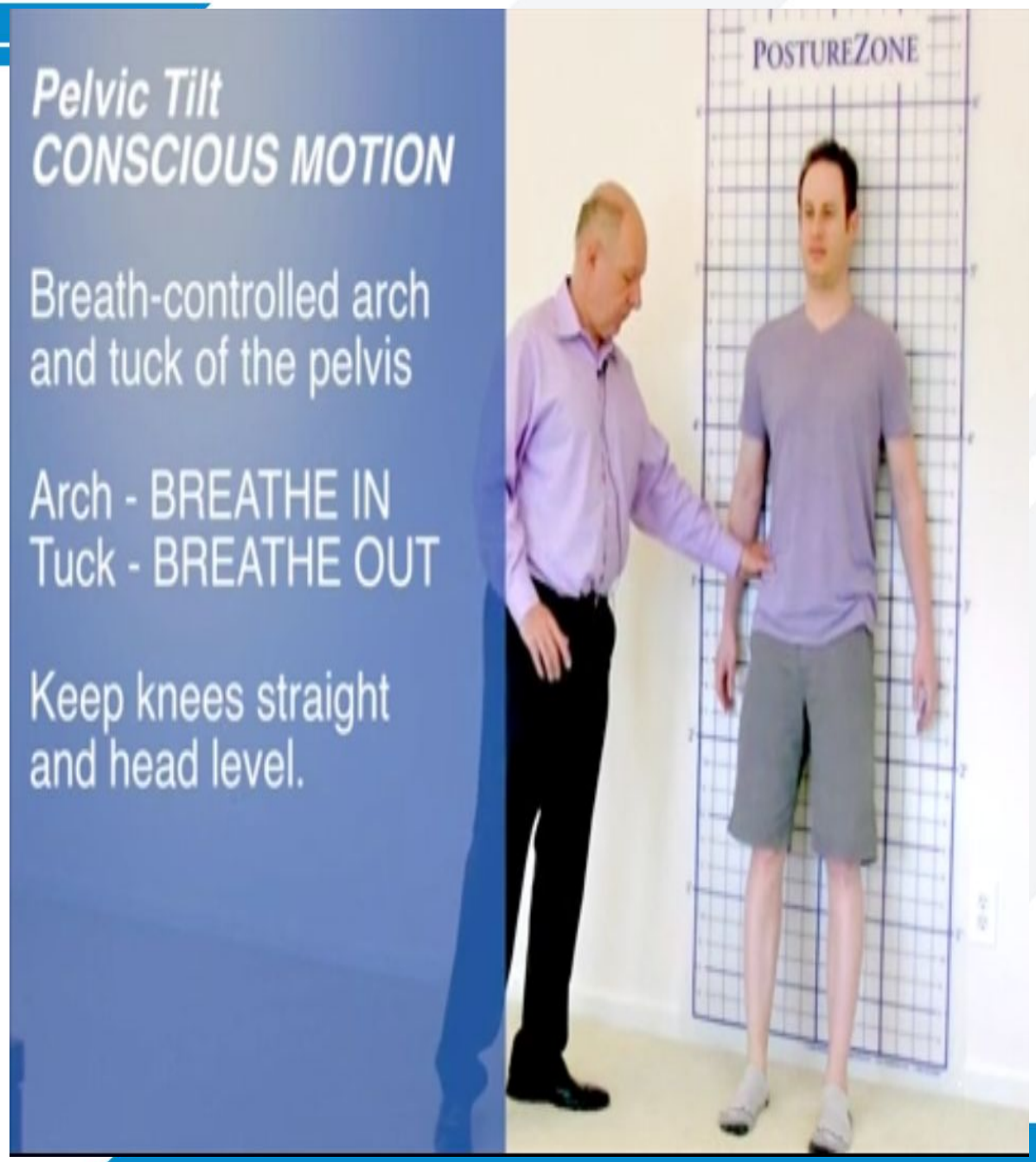
- Sets foundation for movement and locomotion
- Interdependent with the nervous system
- Principal action = BREATHE



Intrinsic Kinetic Chain



KEGELS



Intrinsic Kinetic Chain

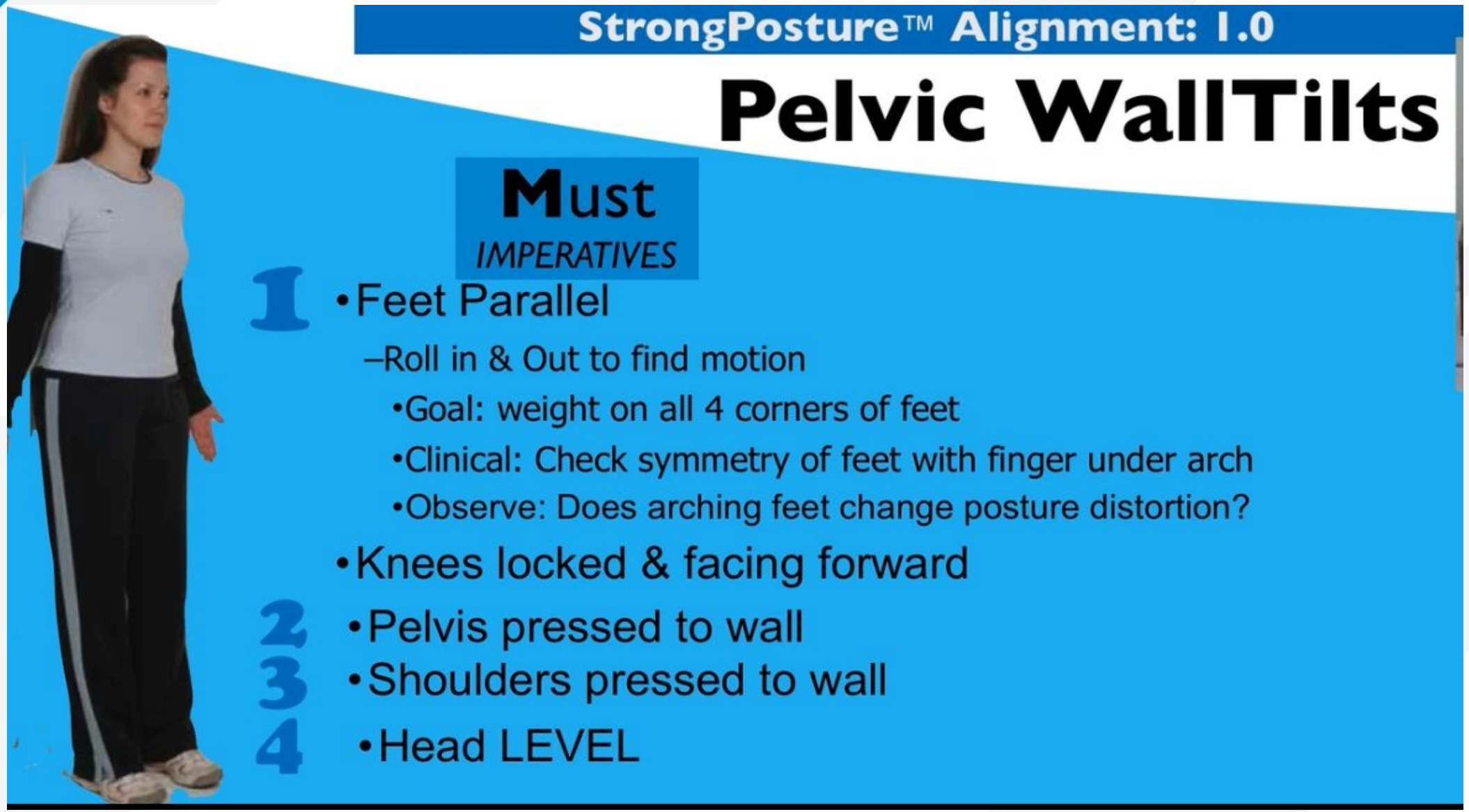
StrongPosture™ Alignment: 1.0

Pelvic WallTilts

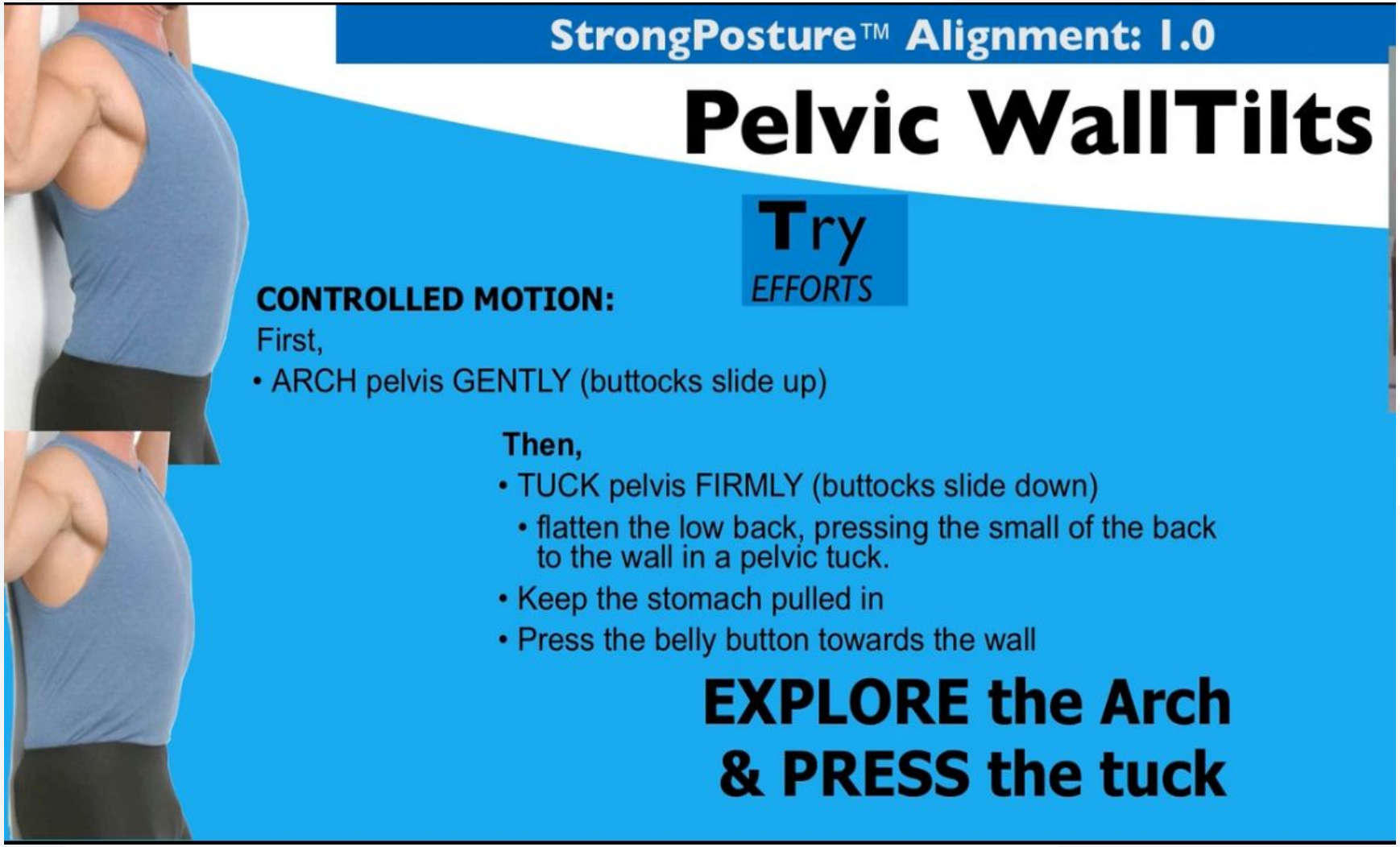
AWARE POSITION:

PostureZone	Must IMPERATIVES	Try EFFORTS
Head	Level	Back Towards wall (Torso alignment)
Torso	Against wall	Vertical
Pelvis	Against wall	
Lower Extremity	Knees locked, (not hyperextended) Pointing straight ahead Hip distance	Level Feet grounded (4 corners)

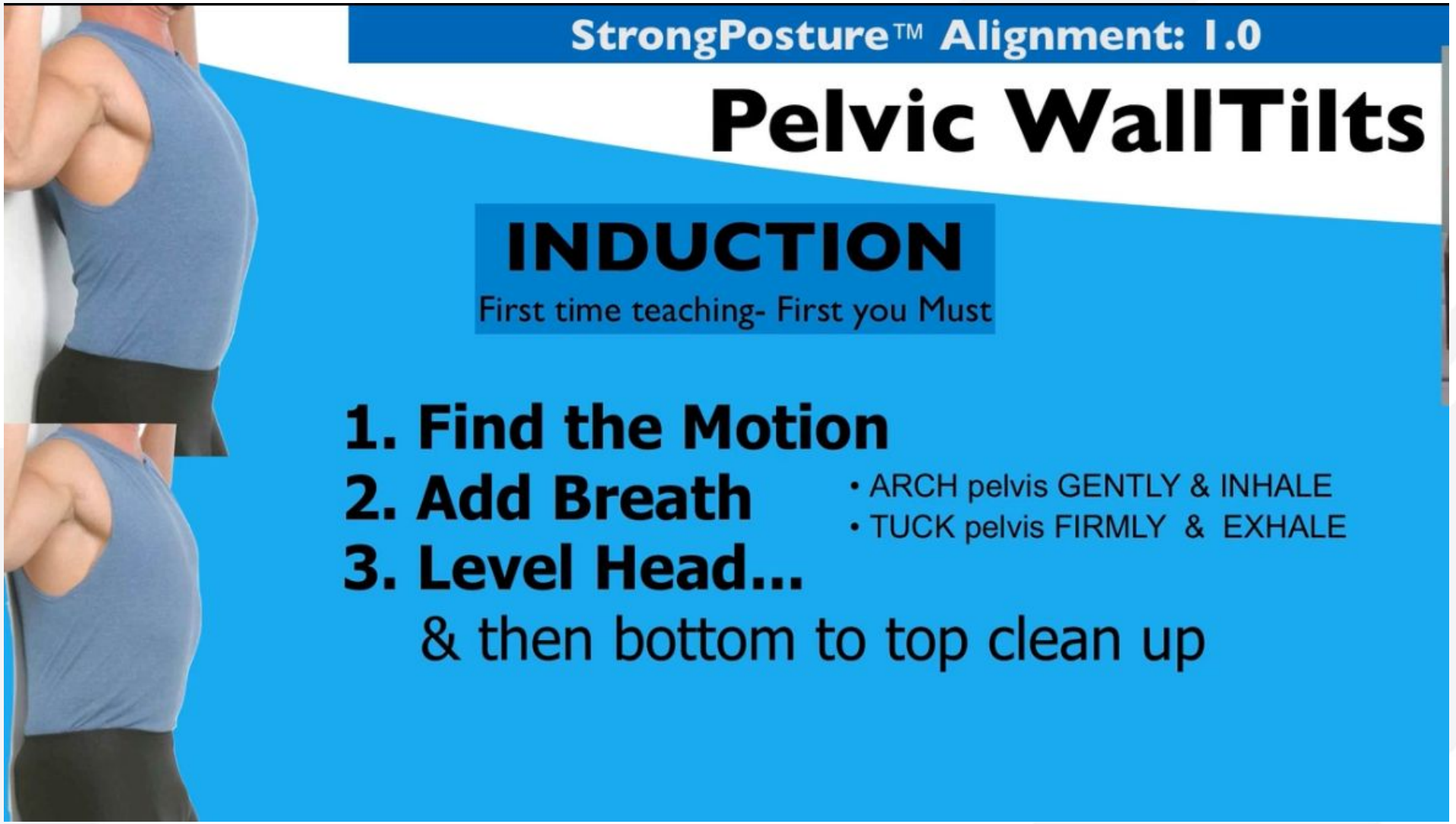
Intrinsic Kinetic Chain



Intrinsic Kinetic Chain



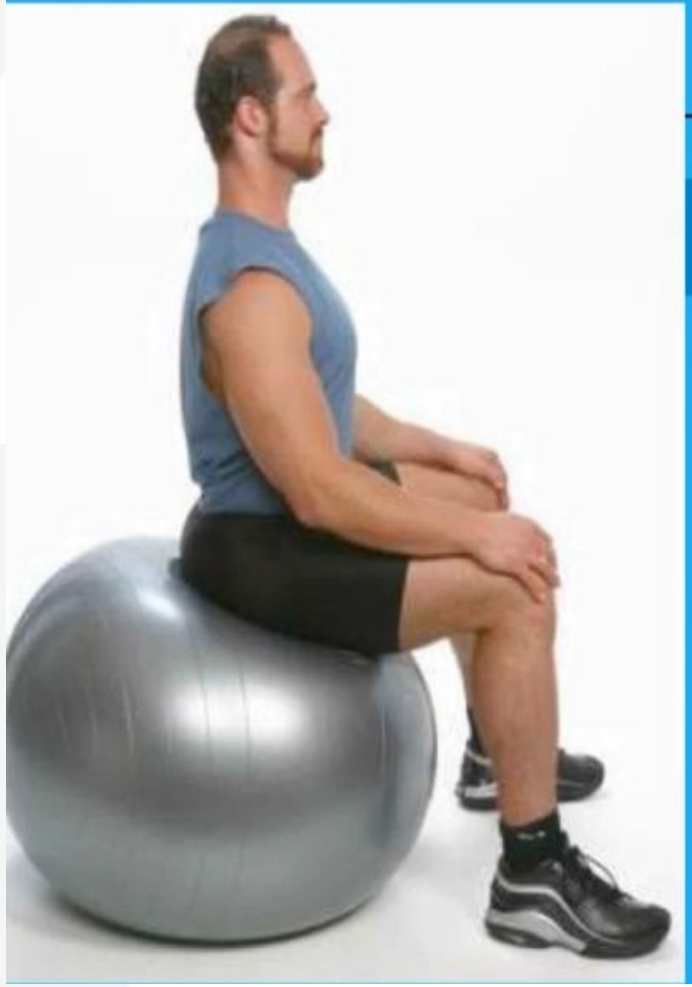
Intrinsic Kinetic Chain



Intrinsic Kinetic Chain

StrongPosture® MOTION track

1.1 BallTilt



–*Goal: Use attentional focus to find, engage and refine control of neglected inner core muscles*

Conscious MOTION

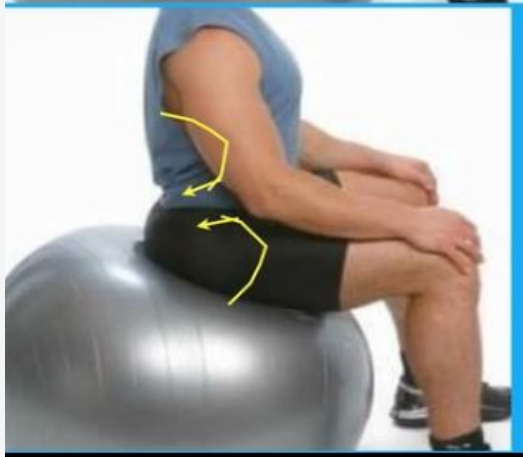
- WallTilt without constraint of wall
- Controlled motion of the pelvis and torso in a full range of motion “wakes up” and strengthens deep, core abdominal muscles
  - –Prevent injury
  - –Optimizes sports performance.

Intrinsic Kinetic Chain

StrongPosture® MOTION track

1.0 BallTilt

Conscious MOTION



Must

Pelvic arch:

- GENTLY Arch the low back into an easy pelvic arch.
  - *–Explore but don't press the arch*

Try

Pelvic tuck

–Then,

–Flatten low back

–Touch small of back to wall

–Pull stomach in

–Press the belly button towards the wall

–Press the tuck

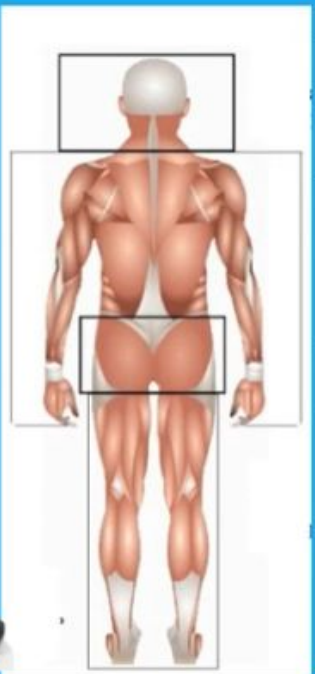
–Goal: Find & Engage negected inner core muscles

Intrinsic Kinetic Chain

StrongPosture® MOTION track

BallSit / BallTilt

Aware Position



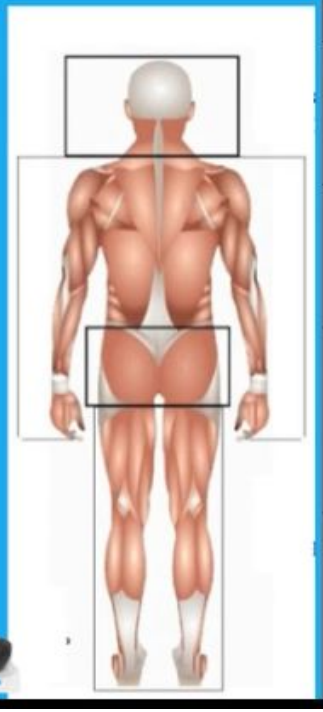
PostureZone	Must IMPERATIVES	Try EFFORTS
Head	Level CoM To Torso alignment	Back
Torso	Towards vertical - Tall CoM To Pelvis align Palms UP	
Pelvis	Towards Level - Engaged	
Lower Extremity	Hips above Knees Knees over Ankles Feet hip distance, straight ahead	

Intrinsic Kinetic Chain

StrongPosture® MOTION track

BallSit / BallTilt

Conscous Motion

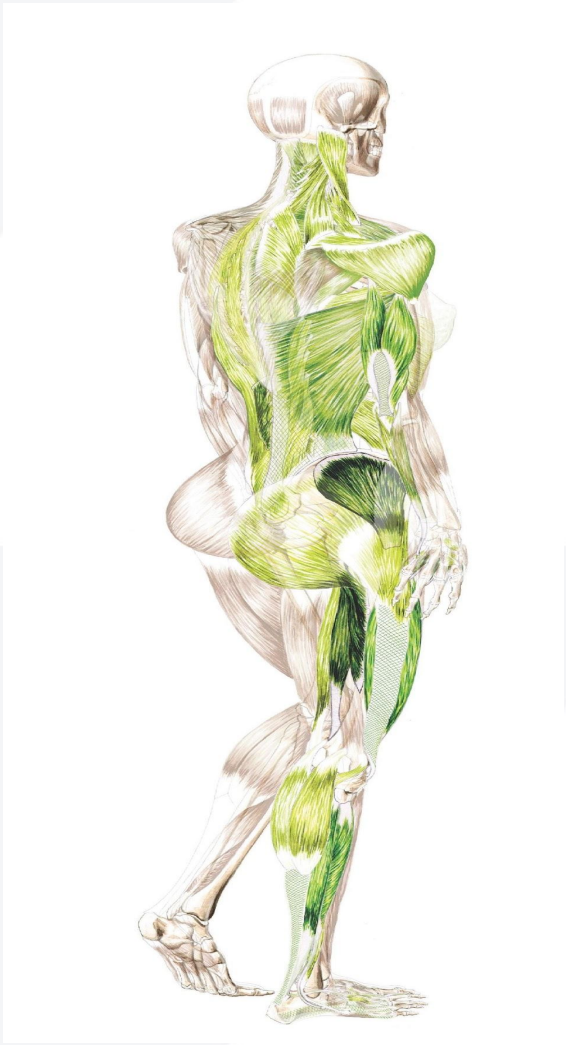


PostureZone	Must IMPERATIVES	Try EFFORTS
Head	Level and Stable	Back
Torso	Vertical and stable	
Pelvis	Ball rolls BACK on Inspiration FORWARD on Expiration	
Lower Extremity	Stable KNEES SHOULD NOT MOVE	

Deep Longitudinal

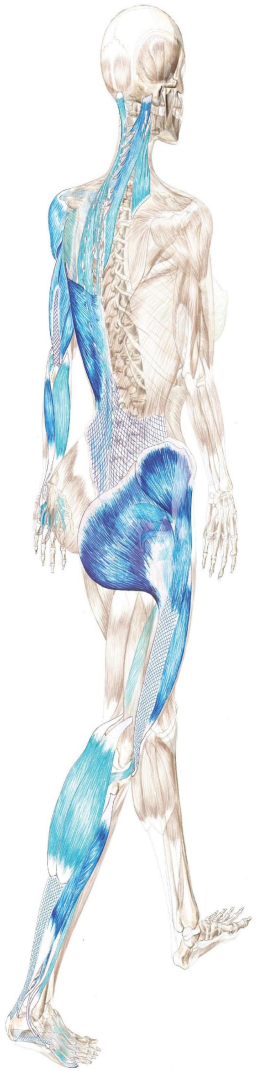
Ipsilateral	Deep Longitudinal	Action	Prime Mover
		Toe Flexor	Flexor Hallicus Longus
	Deep Longitudinal Subsystem	Ankle Dorsiflexion	Tbialis Anterior
	Deep Longitudinal Subsystem	Ankle Eversion	Peronus Longus
	Deep Longitudinal Subsystem	Knee Flexion	Biceps Femoris
		Knee Extension	Rectus Femoris
		Hip Adduction	Adductor Magnus
		Hip Abduction	Gluteus Medius
		Lateral Fascial Spring	Iliotibial Band
	Deep Longitudinal Subsystem	Pelvic Stablaization	Sacrotuberous Ligament
	Deep Longitudinal Subsystem	Sacral Stabalization	Sacroiliac Joint
	Deep Longitudinal Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
Contralateral	Deep Longitudinal Subsystem	Torso Extension/Stabalization	Erector Spinae
		Neck Rotation/Stabalization	Upper Trapezius
		Scapular Protraction	Serratus Anterior
		Humeral Adduction	Pectoralis
		Humeral Abduction	Middle Deltoid
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radialis Longus
		Finger Abduction	Abductor Pollicis

Lateral



Ipsilateral	Lateral Subsystem	Action	Prime Mover
		Toe Extension	Extensor Hallicus Longus
		Plantar Fascial Spring	Plantar Aponeurosis
		Posterior Leg Fascial Spring	Achilles Tendon
		Ankle Flexion	Soleus
		Ankle Eversion	Peroneus Longus
		Plantar Flexion/Inversion	Tibialis Posterior
		Knee Extension	Vastus Lateralis
		Lateral Fascial Spring	Iliotibial Band
	Lateral Subsystem	Hip Abduction/Stabalization	Gluteus Medius
	Lateral Subsystem	Hip Adduction/Stabalization	Adductor Magnus
ContraLateral	Lateral Subsystem	Lateral Trunk Stabalixation	Quadratus Lumborum
		Spinal Stabalization	Thoracolumbar Fascia
Ipsilateral		Spinal Stabalization	Thoracolumbar Fascia
		Lateral Trunk Stabalization	Quadratus Lumborum
		Lateral Neck Stabalization	Upper Trapezius
		Lateral Scapular Stabalization	Middle Trapezius
		Lateral Humeral Stabalization	Latissimus Dorsi
		Elbow Extension	Triceps
		Wrist Adduction	Extensor Carpi Ulnaris
		Fingers Adduction	Lumbricals

Posterior Spiral



Ipsilateral	Posterior Spiral Subsystem	Action	Prime Mover
		Toe Extension	Extensor Hallicus Longus
		Plantar Fascial Spring	Plantar Aponeurosis
		Posterior Leg Fascial Spring	Achilles Tendon
		Ankle Flexion	Soleus
		Ankle Eversion	Peroneus Longus
		Plantar Flexion/Inversion	Tibialis Posterior
		Knee Extension	Vastus Lateralis
		Lateral Fascial Spring	Iliotibial Band
	Posterior Spiral Subsystem	Hip Extension/External Rotation	Gluteus Maximus
	Posterior Spiral Subsystem	Hip Abduction	Gluteus Medius
	Posterior Spiral Subsystem	Sacrum Stabilization	Sacroiliac Joint
Contralateral	Posterior Spiral Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
	Posterior Spiral Subsystem	Trunk Rotattion	Latisimus Dorsi
		Neck Rotation/Stabalization	SCM
Ipsilateral	Posterior Spiral Subsystem	Neck Rotation/Stabalization	Slpenius Capitus
Contralateral		Humeral Extension/Stabalization	Posterior Deltoid
		Elbow Extension	Triceps
		Wrist Adduction	Extensor Carpi Ulnaris
		Finger Adduction	Lumbricals

Master Fascial Spring

- The Thoracolumbar Fascia

- The rotary action of the core cylinder allows for an efficient coiling and uncoiling of stored elastic energy.

- The top of the cylinder is capped with thoracic diaphragm; the bottom with the pelvic diaphragm. This connects the contralateral balance to hip and shoulder with the direct influence of breathe.

Here is a simple movement you can do to feel coiling and translation into the complementary opposite.

- Stand in a split stance
- Rotate the torso to the front leg side
- Notice the pelvis rotating to the back-leg side
- Contralateral rotation of shoulders to legs
- Head forward, eyes level to horizon
- Notice cervical spine in opposite rotation to thoracic
- This is coiled and poised to translate stored elastic energy into the complementary opposite
- Release the stored elastic energy to arrive in the opposite split stance
- This simple movement drill demonstrates the spiral counter spiral of the axial skeleton. This is an essential function that coils elastic energy into the connective tissue structures during gait.

Anterior Spiral

Ipsilateral	Anterior Spiral Subsystem	Action	Primer Mover
		Toe Flexor	Flexor Hallicus Longus
		Ankle Dorsiflexion	Tibialis Anterior
		Ankle Eversion	Peroneus Longus
		Knee Flexion	Biceps Femoris
	Anterior Spiral Subsystem	Hip Flexion/Stabalization	Adductor Longus
		Hip Flexion/Lumbar Stabalization	Iliacus
	Anterior Spiral Subsystem	Trunk Stabalization Flexion (PITCH)	Rectus Abdominus
	Anterior Spiral Subsystem	Trunk Stabalization Rotation (YAW)	Internal Oblique
Contralateral	Anterior Spiral Subsystem	Trunk Stabalization Lateral Flexion (ROLL)	External Oblique
Ipsilateral		Neck Rotation/Stabalization	SCM
Contralateral		Neck Rotation/Stabalization	Splenis Capitus
		Scapular Protraction/Stabalization	Serratus Anterior
		Humeral Extension/Adduction	Pectoralis Major
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radislis Longus
		Finger Abduction	Dorsal Interossei

PUTTING IT ALL TOGETHER

The Gait Cycle

- The gait cycle starts with the Deep Longitudinal, shock absorption.
- The kinetic wave of energy is absorbed and translated into the axis of the spine.
- The Lateral completes the dynamic platform for the power generating Spirals.
- The Posterior Spiral coils fascial spring tension.
- That energy is then translated through the Anterior Spiral into forward motion and next absorption phase of the Deep Longitudinal.

Deep Longitudinal

- The **Deep Longitudinal Kinetic Chain** is an energy absorption system. The strike phase of the gait absorbs kinetic energy from gravity and the subsequent swing phase of the Anterior Spiral Kinetic Chain.

- Ground engagement starts with the heel strike. The kinetic energy wave moves up to and through the axis of the spine.

- The energy of group engagement is absorbed through **the Deep Longitudinal**, and the response of the structure is ground force reaction. The Lateral Kinetic Chain responds to shock absorption with push into the earth.

Lateral

- **Lateral Kinetic Chain takes the kinetic energy of ground engagement and translates it into ground force reaction.** The stance phase of the gate is a transition between energy absorption of the Deep Longitudinal and the energy generation of the Posterior Spiral.

- **Dynamic stability is the interdependent relationship between mobility and stability**.

- **Walking is a series of transitioning weight from one leg to the other while making forward progress**. The midline stabilization of the stance phase orientates the spiral energy to the axis of the spine. The Lateral Kinetic Chain is paired with the contra-lateral opposite, anterior Spiral. The lateral completes the dynamic platform for forward movement.

- **The feet are rich in pressure receptors that direct ground force reaction**. The integrated activation of the mechanoreceptors in the joints of the feet are vital for kinetic chain sequencing. Walking gait integration starts at the feet and moves upwardly joint by joint.

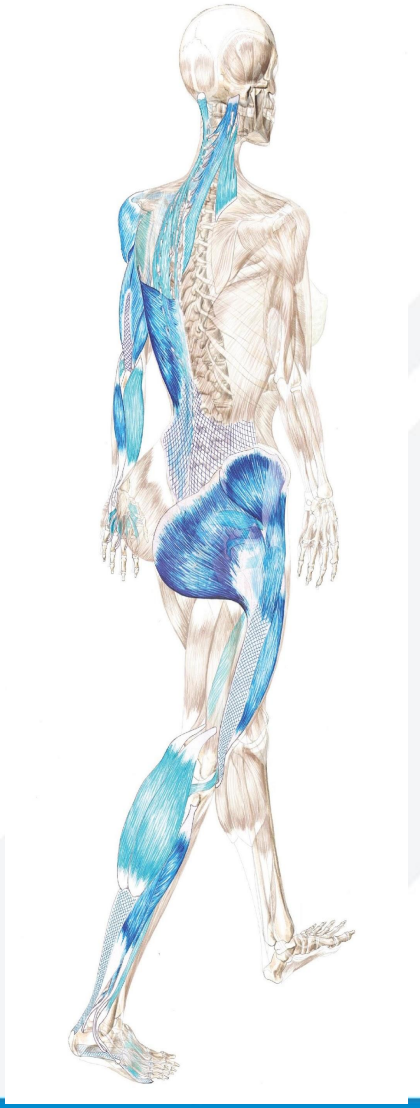
Posterior

- **Utilizes the dynamic platform of the previous three kinetic chains.**

- The work production of the Posterior Spiral activates the fascial matrix to store elastic energy.

- A fascial spring is how energy is stored for location. Elastic energy is stored in the tissues by two mechanisms. One is the compression occurring as the tissues are coining into a tight spring. The second mode of storing elastic energy is through the lengthening, or stretching of fascia or connective tissue.

- The Posterior Spiral has four major fascial springs ~ the thoracolumbar fascia, the iliotibial band, the Achilles tendon, and the plantar aponeurosis. These facial springs work together synergistically to create efficient movement so that the muscles do not have to work as hard.



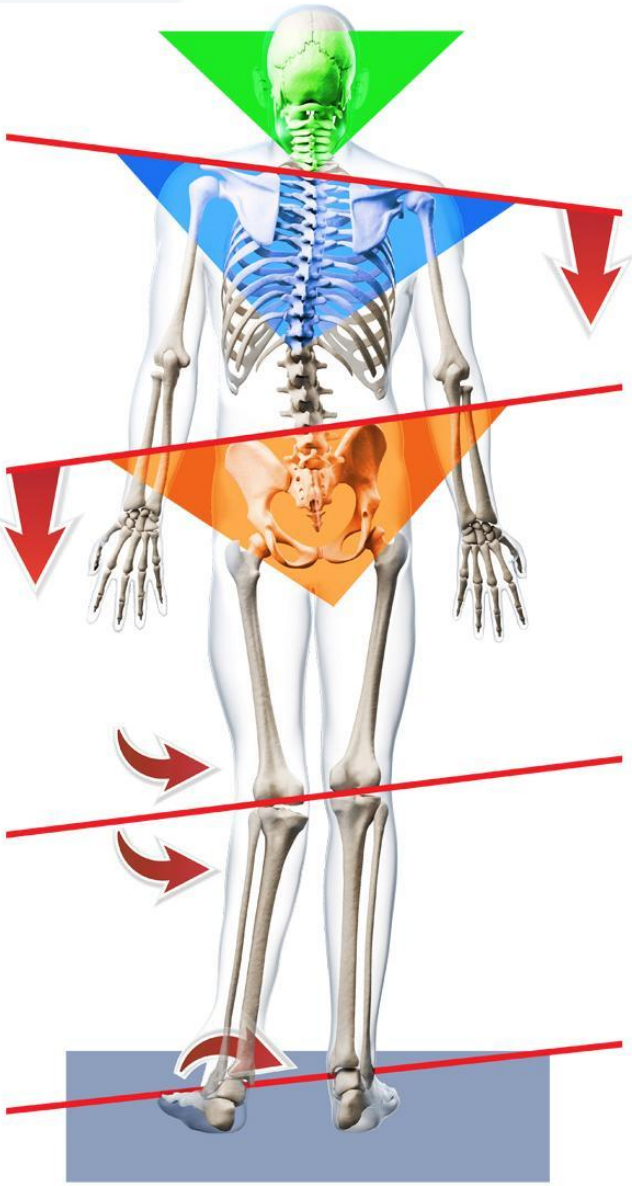
Anterior

- The Anterior Spiral completes the gait cycle.

- Elastic energy up to this point has been stored in the tissues, and now the body is poised to do something with that energy. The Anterior Spiral redirects the elastic energy of the Posterior Spiral into the swing phase of the gait. This forward motion then becomes the next shock absorption of the Deep Longitudinal, thus completing the gait cycle.

- Anterior Spiral is the release of elastic energy into the complementary movement.

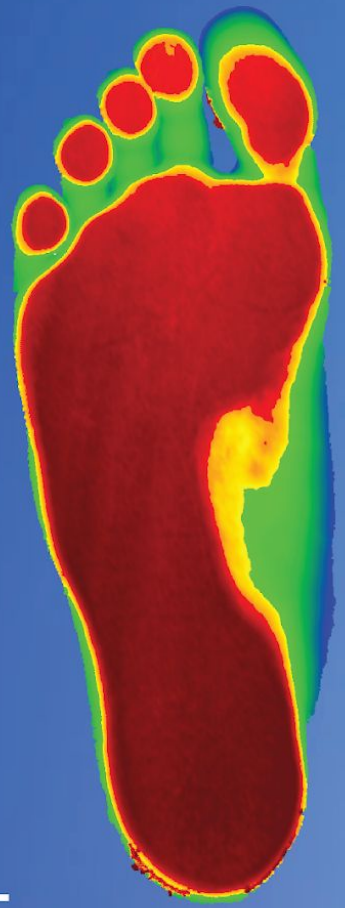
Everyone is Crooked Man



FOOT LEVELERS

SCAN
EVERY PATIENT

- Use the scan as an **educational tool**
- Show patients how **the feet play an instrumental role in the care you provide**
- **Overpronation causes biomechanical dysfunction**



77% of patients had improved balance with Foot Levelers custom orthotics

"77% of Participants Improve Body Balance with Stabilizer." John Hyland, DC, MPH DABCR, DABCO, CSCS

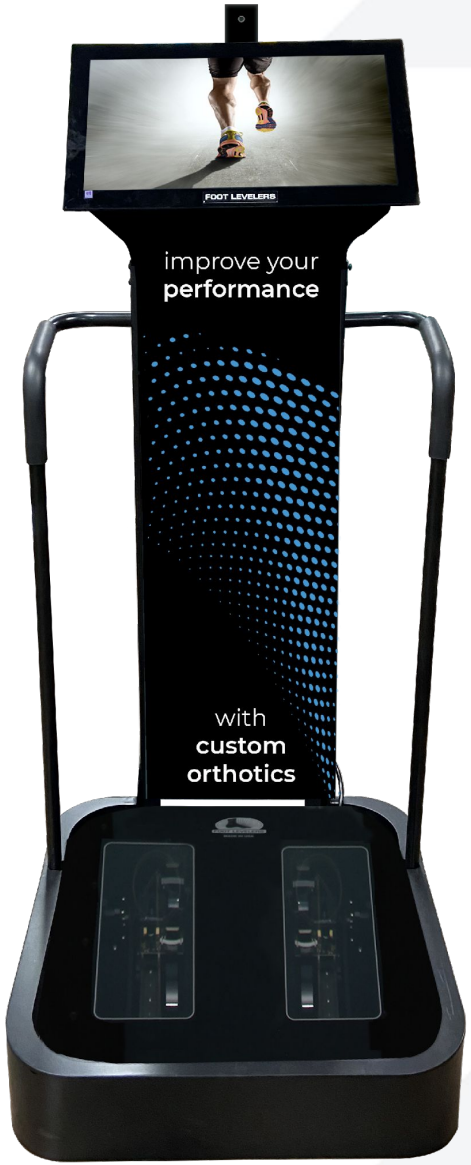
EVERYONE NEEDS CUSTOM ORTHOTICS

MAKE SCANNING YOUR PROTOCOL

FOOT LEVELERS

Scanner

- Quick
- Easy to use
- Engaging
- Educational
- Report of Findings



The Foot Levelers Kiosk

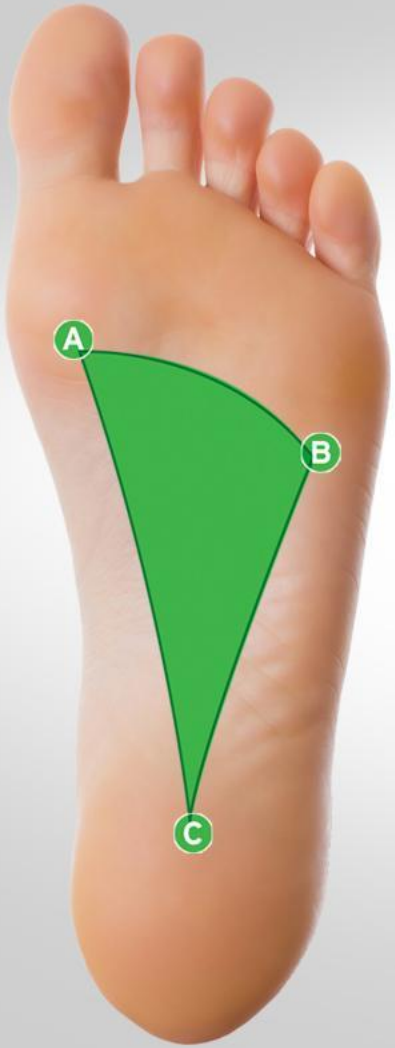
Standard Design
Dual-Foot Kiosk

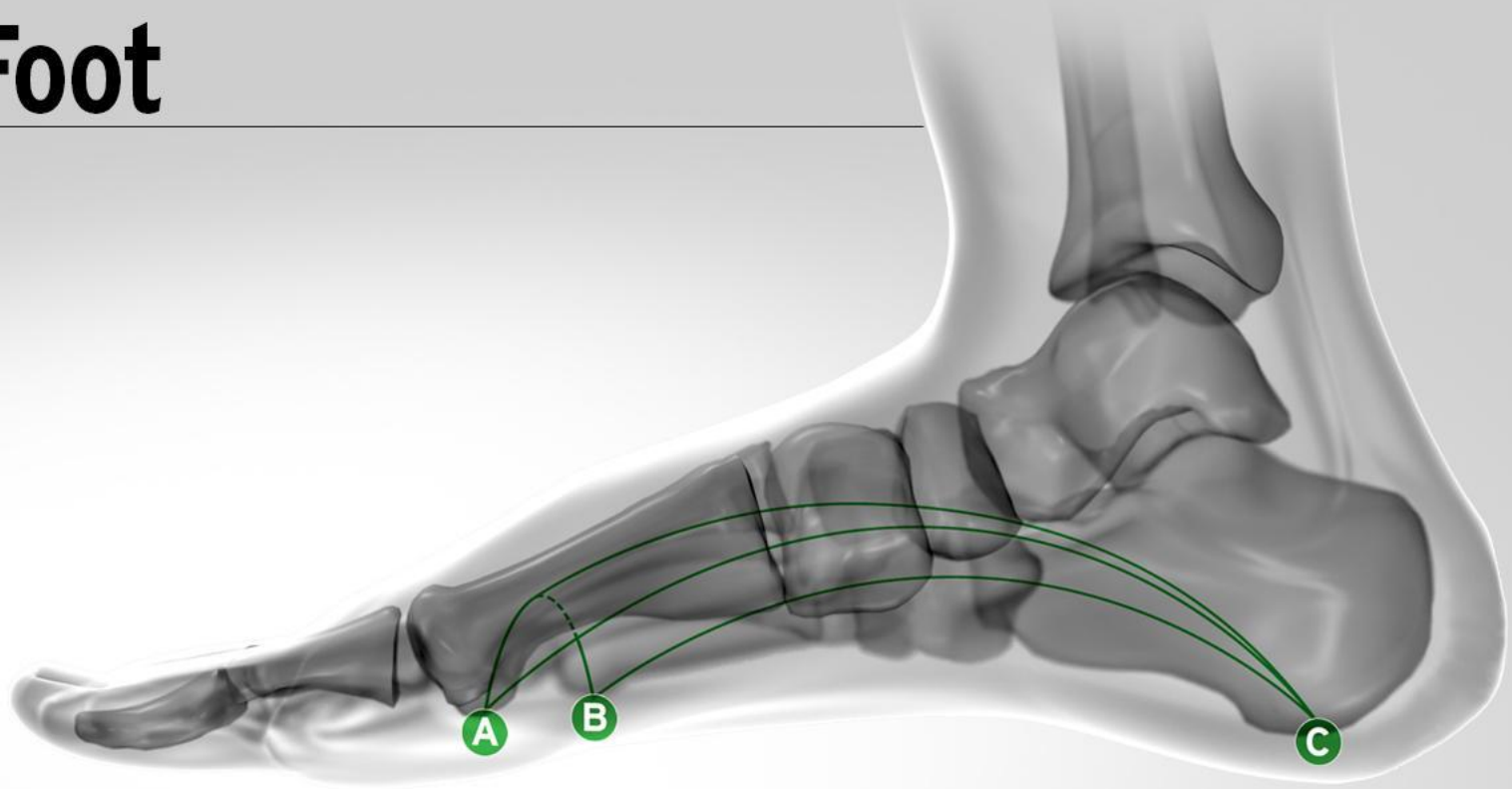
Ease Your Pain Design
Dual-Foot Kiosk

Spanish Design
Dual-Foot Kiosk

Performance Design
Dual-Foot Kiosk

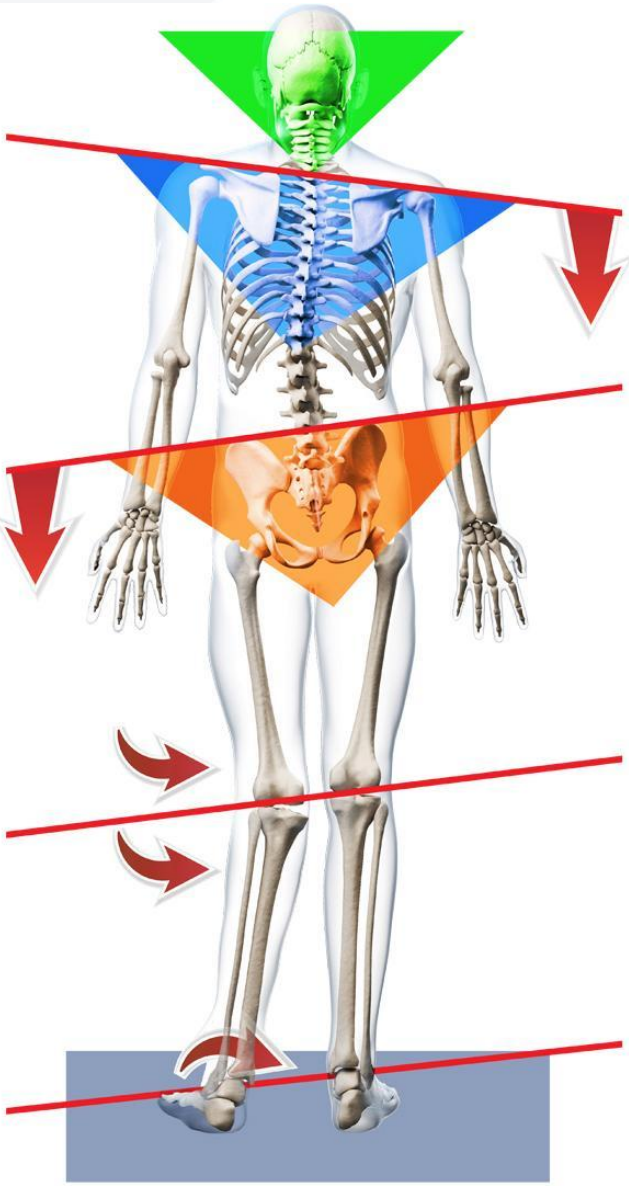
Arches of the Foot





A-B Anterior Transverse Arch
B-C Lateral Longitudinal Arch
A-C Medial Longitudinal Arch

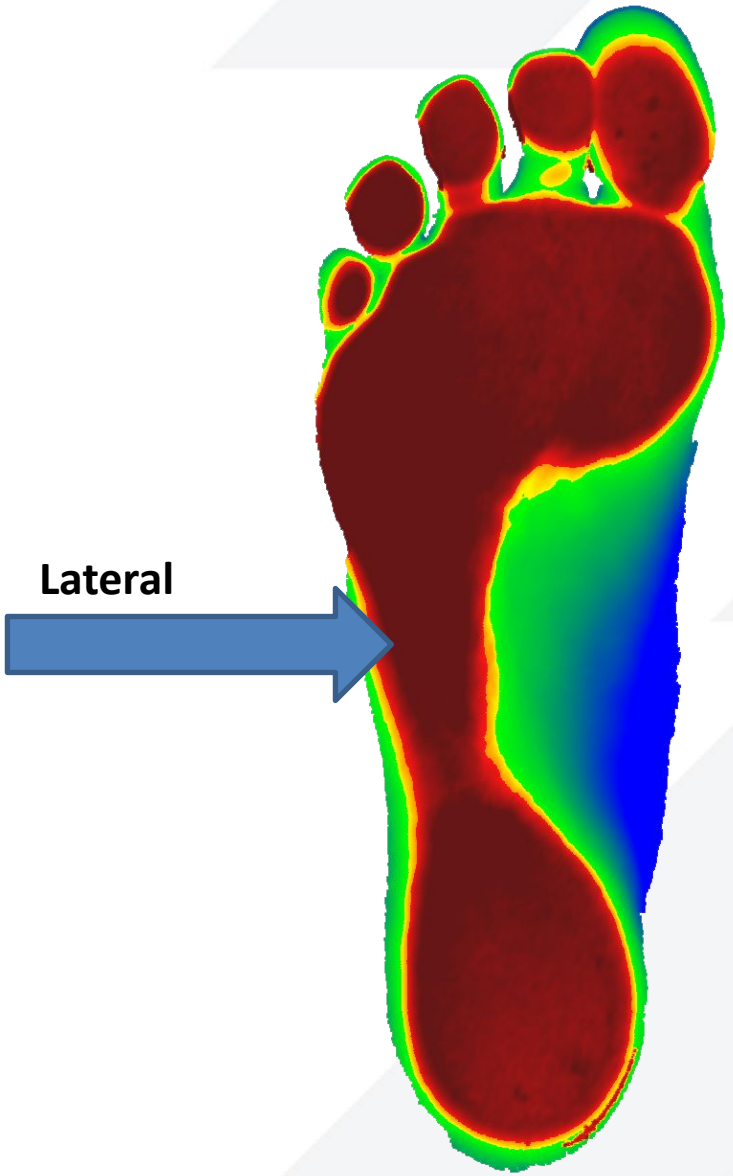
Everyone is Crooked Man



FOOT LEVELERS

Lateral Arch

- Active Chain Response
- Deep Longitudinal
- Anterior Spiral



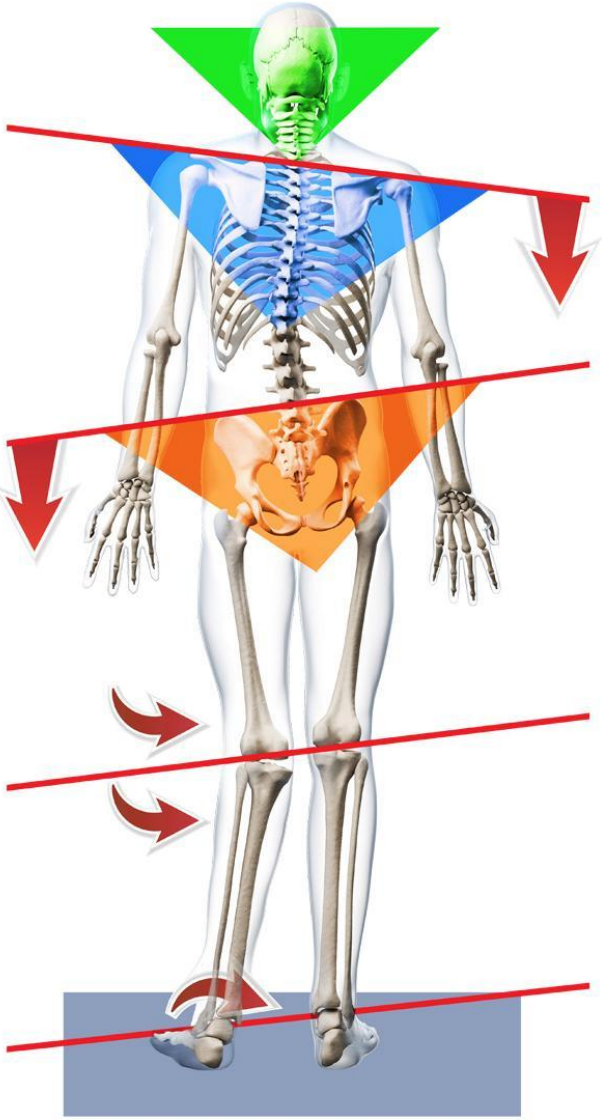
Deep Longitudinal

Ipsilateral	Deep Longitudinal	Action	Prime Mover
		Toe Flexor	Flexor Hallicus Longus
	Deep Longitudinal Subsystem	Ankle Dorsiflexion	Tbialis Anterior
	Deep Longitudinal Subsystem	Ankle Eversion	Peronus Longus
	Deep Longitudinal Subsystem	Knee Flexion	Biceps Femoris
		Knee Extension	Rectus Femoris
		Hip Adduction	Adductor Magnus
		Hip Abduction	Gluteus Medius
		Lateral Fascial Spring	Iliotibial Band
	Deep Longitudinal Subsystem	Pelvic Stablaization	Sacrotuberous Ligament
	Deep Longitudinal Subsystem	Sacral Stabalization	Sacroiliac Joint
	Deep Longitudinal Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
Contralateral	Deep Longitudinal Subsystem	Torso Extension/Stabalization	Erector Spinae
		Neck Rotation/Stabalization	Upper Trapezius
		Scapular Protraction	Serratus Anterior
		Humeral Adduction	Pectoralis
		Humeral Abduction	Middle Deltoid
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radialis Longus
		Finger Abduction	Abductor Pollicis

Anterior Spiral

Ipsilateral	Anterior Spiral Subsystem	Action	Primer Mover
		Toe Flexor	Flexor Hallicus Longus
		Ankle Dorsiflexion	Tibialis Anterior
		Ankle Eversion	Peroneus Longus
		Knee Flexion	Biceps Femoris
	Anterior Spiral Subsystem	Hip Flexion/Stabalization	Adductor Longus
		Hip Flexion/Lumbar Stabalization	Iliacus
	Anterior Spiral Subsystem	Trunk Stabalization Flexion (PITCH)	Rectus Abdominus
	Anterior Spiral Subsystem	Trunk Stabalization Rotation (YAW)	Internal Oblique
Contralateral	Anterior Spiral Subsystem	Trunk Stabalization Lateral Flexion (ROLL)	External Oblique
Ipsilateral		Neck Rotation/Stabalization	SCM
Contralateral		Neck Rotation/Stabalization	Splenis Capitus
		Scapular Protraction/Stabalization	Serratus Anterior
		Humeral Extension/Adduction	Pectoralis Major
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radislis Longus
		Finger Abduction	Dorsal Interossei

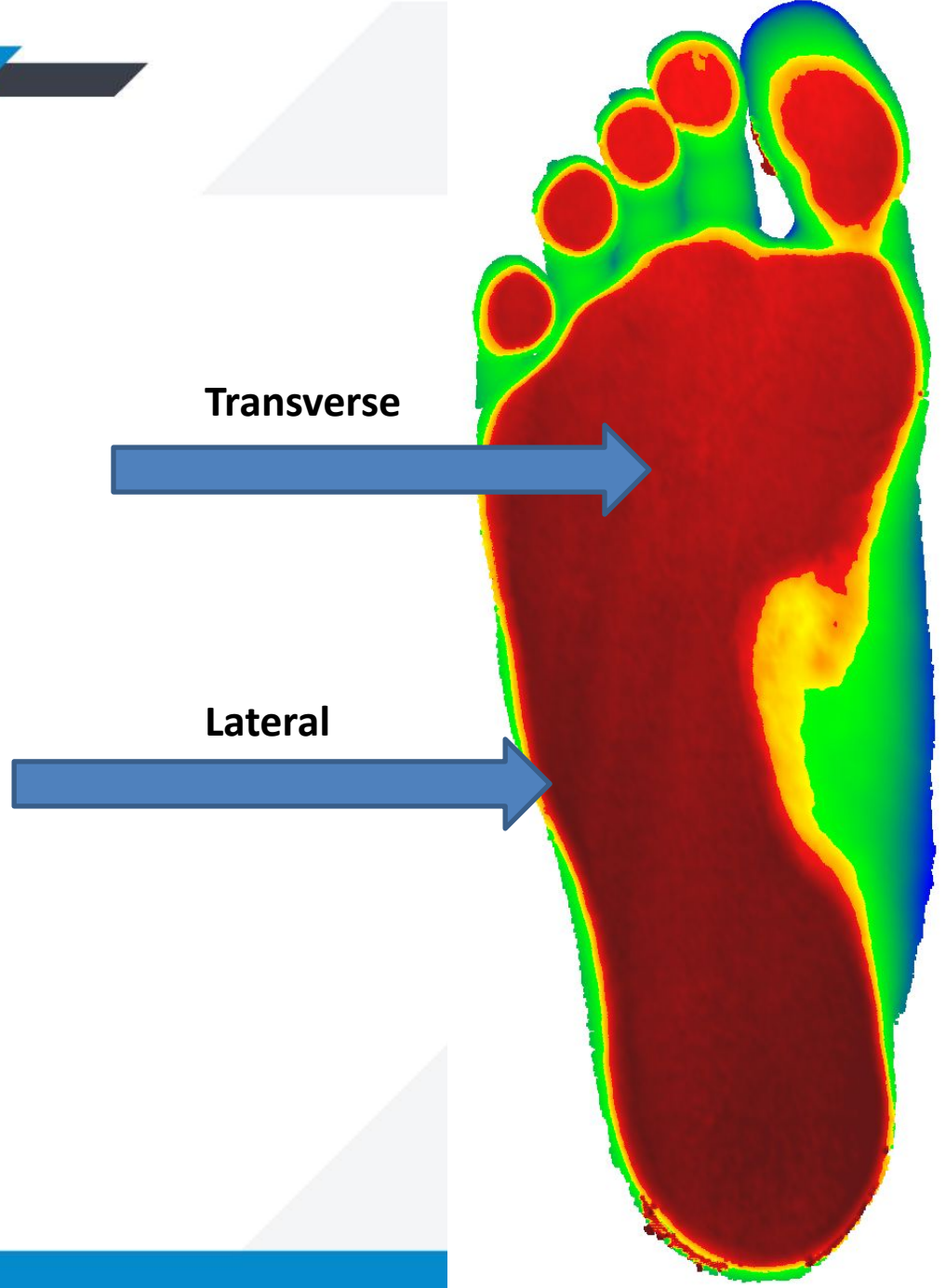
Everyone is Crooked Man



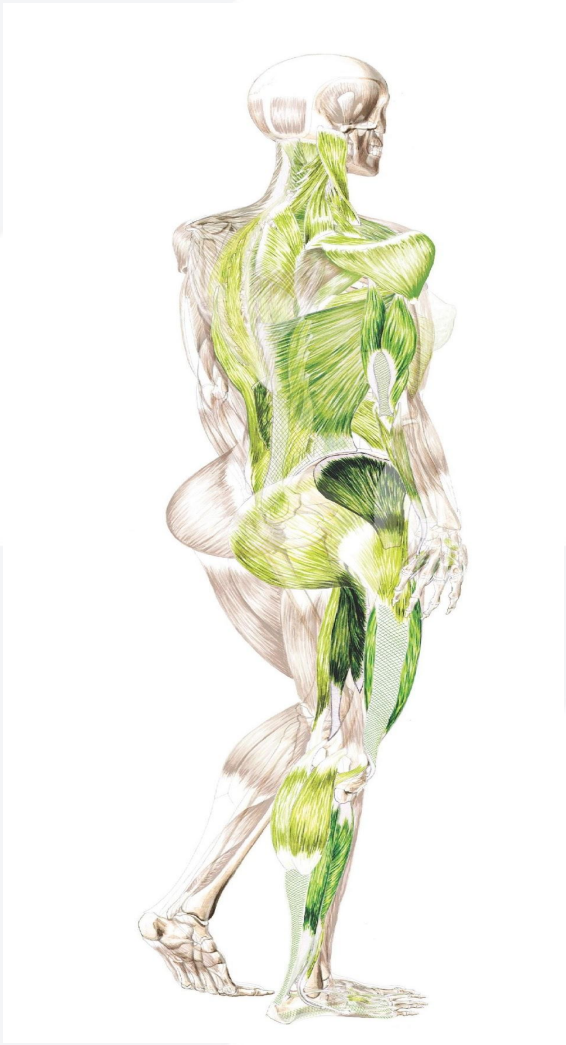
FOOT LEVELERS

Lateral/transverse arch

- Passive Chain Response
- Lateral
- Posterior Spiral

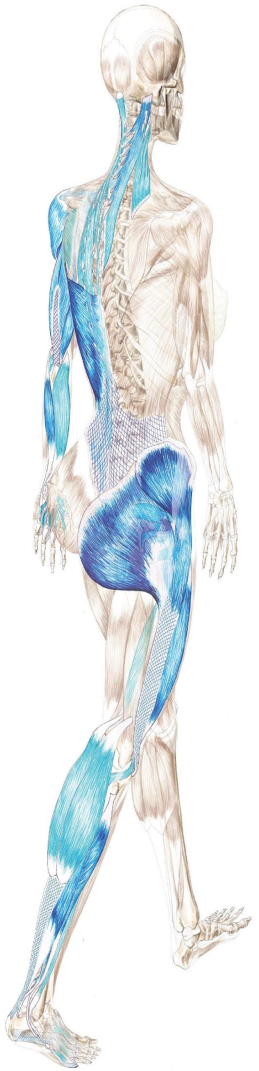


Lateral



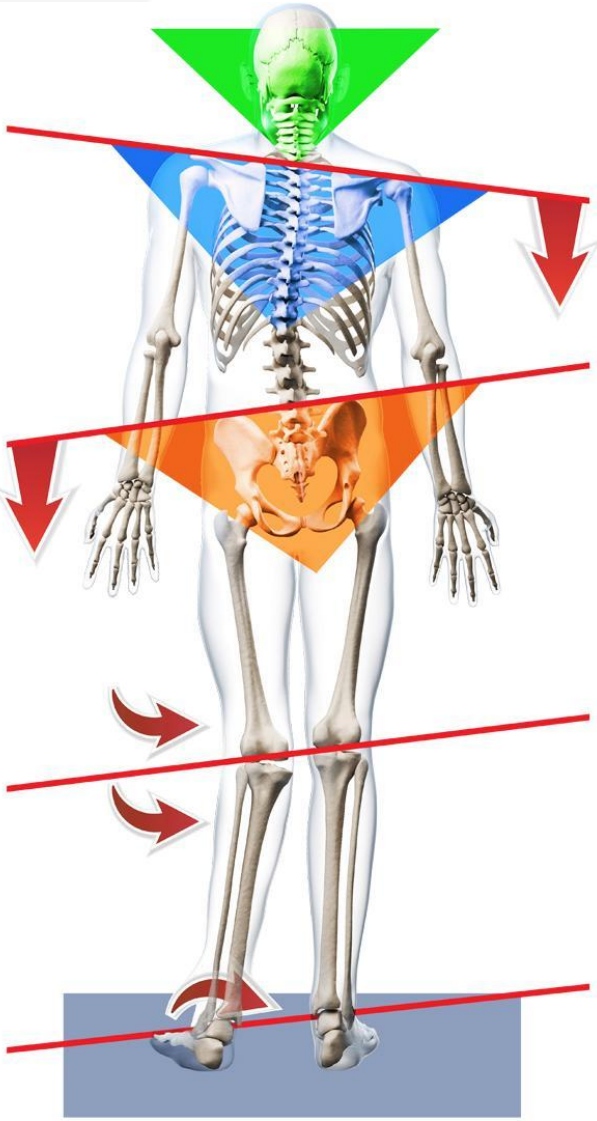
Ipsilateral	Lateral Subsystem	Action	Prime Mover
		Toe Extension	Extensor Hallicus Longus
		Plantar Fascial Spring	Plantar Aponeurosis
		Posterior Leg Fascial Spring	Achilles Tendon
		Ankle Flexion	Soleus
		Ankle Eversion	Peroneus Longus
		Plantar Flexion/Inversion	Tibialis Posterior
		Knee Extension	Vastus Lateralis
		Lateral Fascial Spring	Iliotibial Band
	Lateral Subsystem	Hip Abduction/Stabalization	Gluteus Medius
	Lateral Subsystem	Hip Adduction/Stabalization	Adductor Magnus
ContraLateral	Lateral Subsystem	Lateral Trunk Stabalixation	Quadratus Lumborum
		Spinal Stabalization	Thoracolumbar Fascia
Ipsilateral		Spinal Stabalization	Thoracolumbar Fascia
		Lateral Trunk Stabalization	Quadratus Lumborum
		Lateral Neck Stabalization	Upper Trapezius
		Lateral Scapular Stabalization	Middle Trapezius
		Lateral Humeral Stabalization	Latissimus Dorsi
		Elbow Extension	Triceps
		Wrist Adduction	Extensor Carpi Ulnaris
		Fingers Adduction	Lumbricals

Posterior Spiral



Ipsilateral	Posterior Spiral Subsystem	Action	Prime Mover
		Toe Extension	Extensor Hallicus Longus
		Plantar Fascial Spring	Plantar Aponeurosis
		Posterior Leg Fascial Spring	Achilles Tendon
		Ankle Flexion	Soleus
		Ankle Eversion	Peroneus Longus
		Plantar Flexion/Inversion	Tibialis Posterior
		Knee Extension	Vastus Lateralis
		Lateral Fascial Spring	Iliotibial Band
	Posterior Spiral Subsystem	Hip Extension/External Rotation	Gluteus Maximus
	Posterior Spiral Subsystem	Hip Abduction	Gluteus Medius
	Posterior Spiral Subsystem	Sacrum Stabilization	Sacroiliac Joint
Contralateral	Posterior Spiral Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
	Posterior Spiral Subsystem	Trunk Rotattion	Latisimus Dorsi
		Neck Rotation/Stabalization	SCM
Ipsilateral	Posterior Spiral Subsystem	Neck Rotation/Stabalization	Slpenius Capitus
Contralateral		Humeral Extension/Stabalization	Posterior Deltoid
		Elbow Extension	Triceps
		Wrist Adduction	Extensor Carpi Ulnaris
		Finger Adduction	Lumbricals

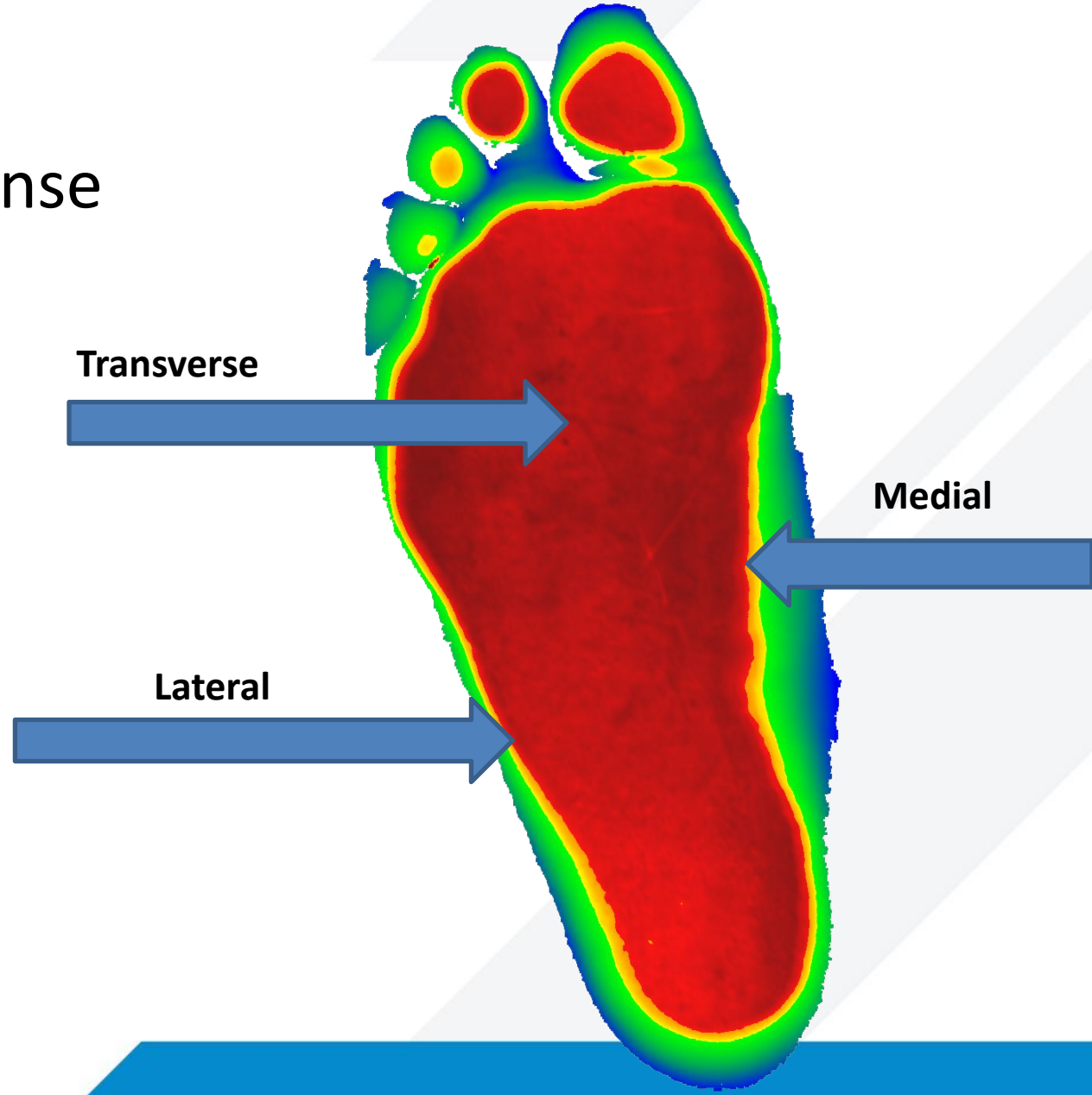
Everyone is Crooked Man



FOOT LEVELERS

Lateral/Transverse/Medial

- Active and Passive Chain Response
- Deep Longitudinal
- Anterior Spiral
- Lateral
- Posterior Spiral



Case Studies/Common Conditions

Shin Splits

- Direct – Tibialis Anterior

Deep Longitudinal

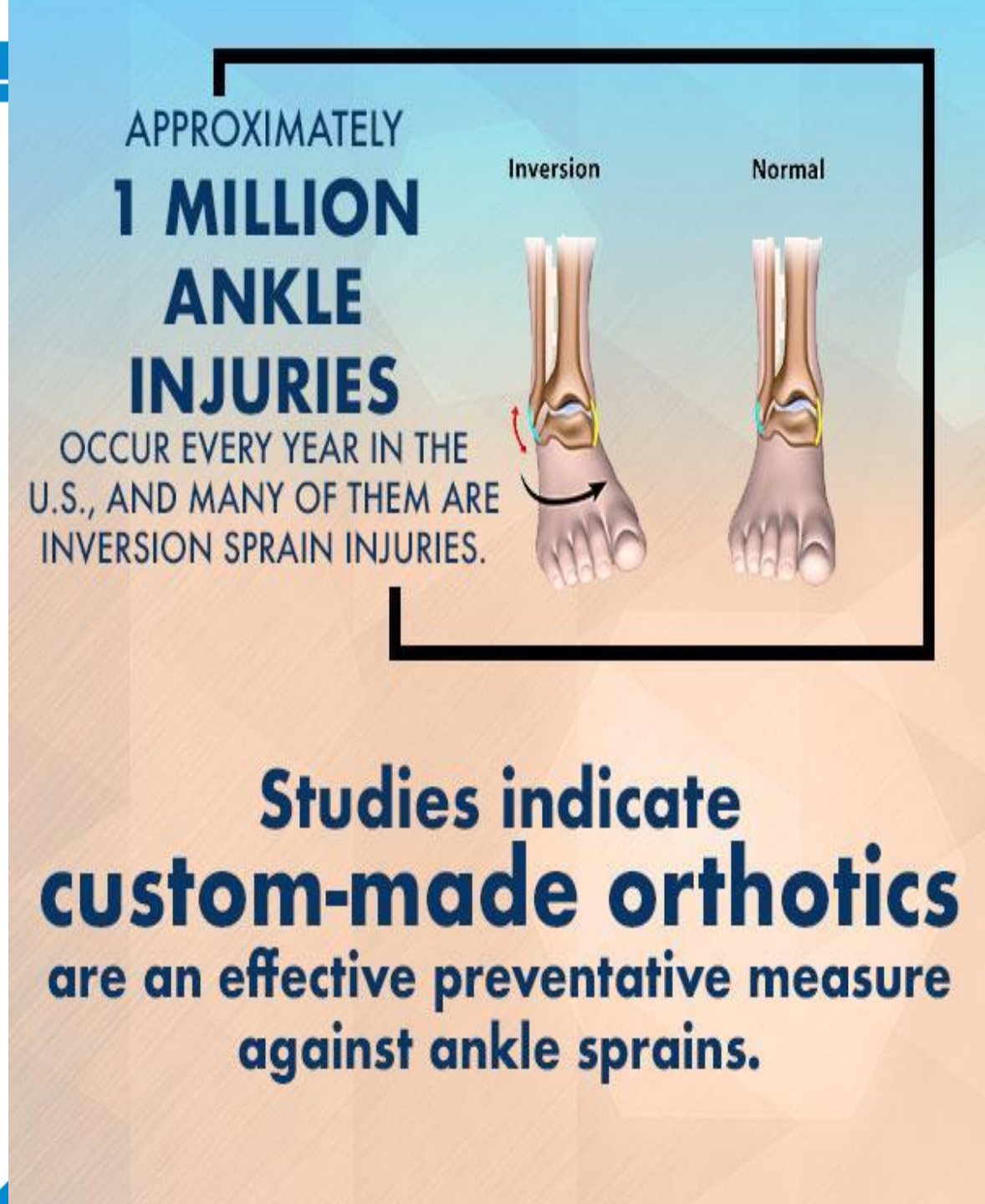
Ipsilateral	Deep Longitudinal	Action	Prime Mover
		Toe Flexor	Flexor Hallicus Longus
	Deep Longitudinal Subsystem	Ankle Dorsiflexion	Tbialis Anterior
	Deep Longitudinal Subsystem	Ankle Eversion	Peronus Longus
	Deep Longitudinal Subsystem	Knee Flexion	Biceps Femoris
		Knee Extension	Rectus Femoris
		Hip Adduction	Adductor Magnus
		Hip Abduction	Gluteus Medius
		Lateral Fascial Spring	Iliotibial Band
	Deep Longitudinal Subsystem	Pelvic Stablaization	Sacrotuberous Ligament
	Deep Longitudinal Subsystem	Sacral Stabalization	Sacroiliac Joint
	Deep Longitudinal Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
Contralateral	Deep Longitudinal Subsystem	Torso Extension/Stabalization	Erector Spinae
		Neck Rotation/Stabalization	Upper Trapezius
		Scapular Protraction	Serratus Anterior
		Humeral Adduction	Pectoralis
		Humeral Abduction	Middle Deltoid
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radialis Longus
		Finger Abduction	Abductor Pollicis

Anterior Spiral

Ipsilateral	Anterior Spiral Subsystem	Action	Primer Mover
		Toe Flexor	Flexor Hallicus Longus
		Ankle Dorsiflexion	Tibialis Anterior
		Ankle Eversion	Peroneus Longus
		Knee Flexion	Biceps Femoris
	Anterior Spiral Subsystem	Hip Flexion/Stabalization	Adductor Longus
		Hip Flexion/Lumbar Stabalization	Iliacus
	Anterior Spiral Subsystem	Trunk Stabalization Flexion (PITCH)	Rectus Abdominus
	Anterior Spiral Subsystem	Trunk Stabalization Rotation (YAW)	Internal Oblique
Contralateral	Anterior Spiral Subsystem	Trunk Stabalization Lateral Flexion (ROLL)	External Oblique
Ipsilateral		Neck Rotation/Stabalization	SCM
Contralateral		Neck Rotation/Stabalization	Splenis Capitus
		Scapular Protraction/Stabalization	Serratus Anterior
		Humeral Extension/Adduction	Pectoralis Major
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radislis Longus
		Finger Abduction	Dorsal Interossei

Inversion Sprain

- Direct – Peroneus Longus



Anterior Spiral

Ipsilateral	Anterior Spiral Subsystem	Action	Primer Mover
		Toe Flexor	Flexor Hallicus Longus
		Ankle Dorsiflexion	Tibialis Anterior
		Ankle Eversion	Peroneus Longus
		Knee Flexion	Biceps Femoris
	Anterior Spiral Subsystem	Hip Flexion/Stabalization	Adductor Longus
		Hip Flexion/Lumbar Stabalization	Iliacus
	Anterior Spiral Subsystem	Trunk Stabalization Flexion (PITCH)	Rectus Abdominus
	Anterior Spiral Subsystem	Trunk Stabalization Rotation (YAW)	Internal Oblique
Contralateral	Anterior Spiral Subsystem	Trunk Stabalization Lateral Flexion (ROLL)	External Oblique
Ipsilateral		Neck Rotation/Stabalization	SCM
Contralateral		Neck Rotation/Stabalization	Splenis Capitus
		Scapular Protraction/Stabalization	Serratus Anterior
		Humeral Extension/Adduction	Pectoralis Major
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radislis Longus
		Finger Abduction	Dorsal Interossei

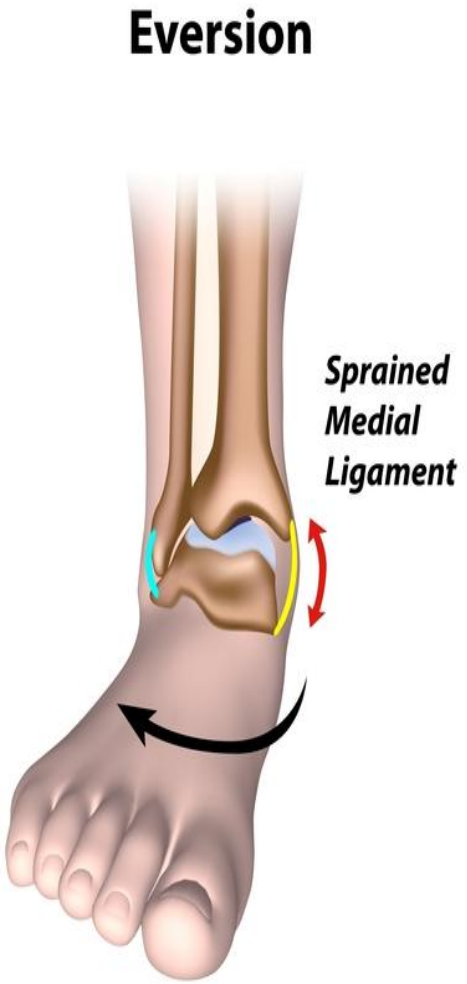
Deep Longitudinal

Ipsilateral	Deep Longitudinal	Action	Prime Mover
		Toe Flexor	Flexor Hallicus Longus
	Deep Longitudinal Subsystem	Ankle Dorsiflexion	Tbialis Anterior
	Deep Longitudinal Subsystem	Ankle Eversion	Peronus Longus
	Deep Longitudinal Subsystem	Knee Flexion	Biceps Femoris
		Knee Extension	Rectus Femoris
		Hip Adduction	Adductor Magnus
		Hip Abduction	Gluteus Medius
		Lateral Fascial Spring	Iliotibial Band
	Deep Longitudinal Subsystem	Pelvic Stablaization	Sacrotuberous Ligament
	Deep Longitudinal Subsystem	Sacral Stabalization	Sacroiliac Joint
	Deep Longitudinal Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
Contralateral	Deep Longitudinal Subsystem	Torso Extension/Stabalization	Erector Spinae
		Neck Rotation/Stabalization	Upper Trapezius
		Scapular Protraction	Serratus Anterior
		Humeral Adduction	Pectoralis
		Humeral Abduction	Middle Deltoid
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radialis Longus
		Finger Abduction	Abductor Pollicis

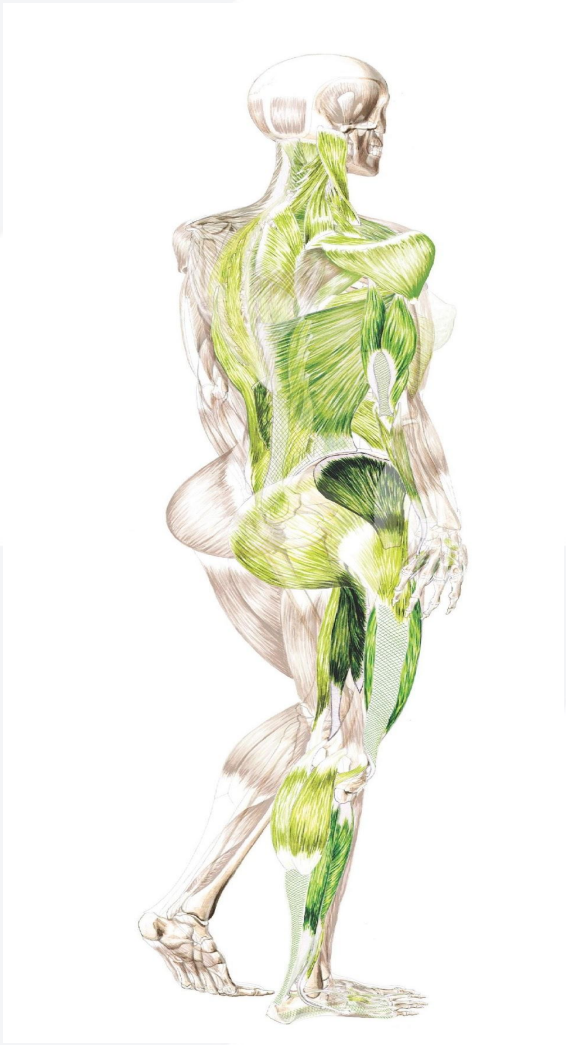
Eversion Sprain

- Direct – Tibialis Posterior

HIGH ANKLE SPRAIN

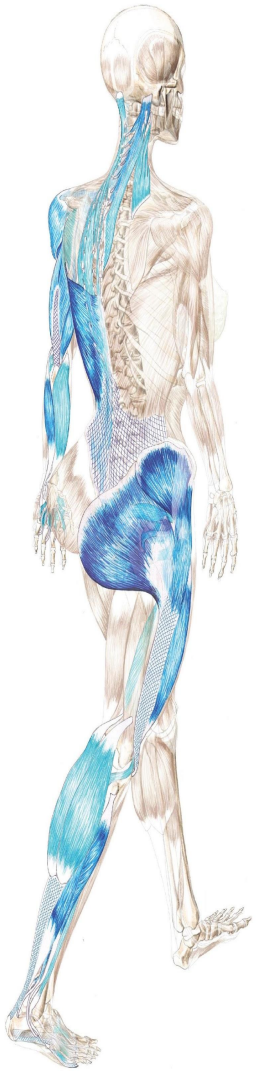


Lateral



Ipsilateral	Lateral Subsystem	Action	Prime Mover
		Toe Extension	Extensor Hallicus Longus
		Plantar Fascial Spring	Plantar Aponeurosis
		Posterior Leg Fascial Spring	Achilles Tendon
		Ankle Flexion	Soleus
		Ankle Eversion	Peroneus Longus
		Plantar Flexion/Inversion	Tibialis Posterior
		Knee Extension	Vastus Lateralis
		Lateral Fascial Spring	Iliotibial Band
	Lateral Subsystem	Hip Abduction/Stabalization	Gluteus Medius
	Lateral Subsystem	Hip Adduction/Stabalization	Adductor Magnus
ContraLateral	Lateral Subsystem	Lateral Trunk Stabalixation	Quadratus Lumborum
		Spinal Stabalization	Thoracolumbar Fascia
Ipsilateral		Spinal Stabalization	Thoracolumbar Fascia
		Lateral Trunk Stabalization	Quadratus Lumborum
		Lateral Neck Stabalization	Upper Trapezius
		Lateral Scapular Stabalization	Middle Trapezius
		Lateral Humeral Stabalization	Latissimus Dorsi
		Elbow Extension	Triceps
		Wrist Adduction	Extensor Carpi Ulnaris
		Fingers Adduction	Lumbricals

Posterior Spiral

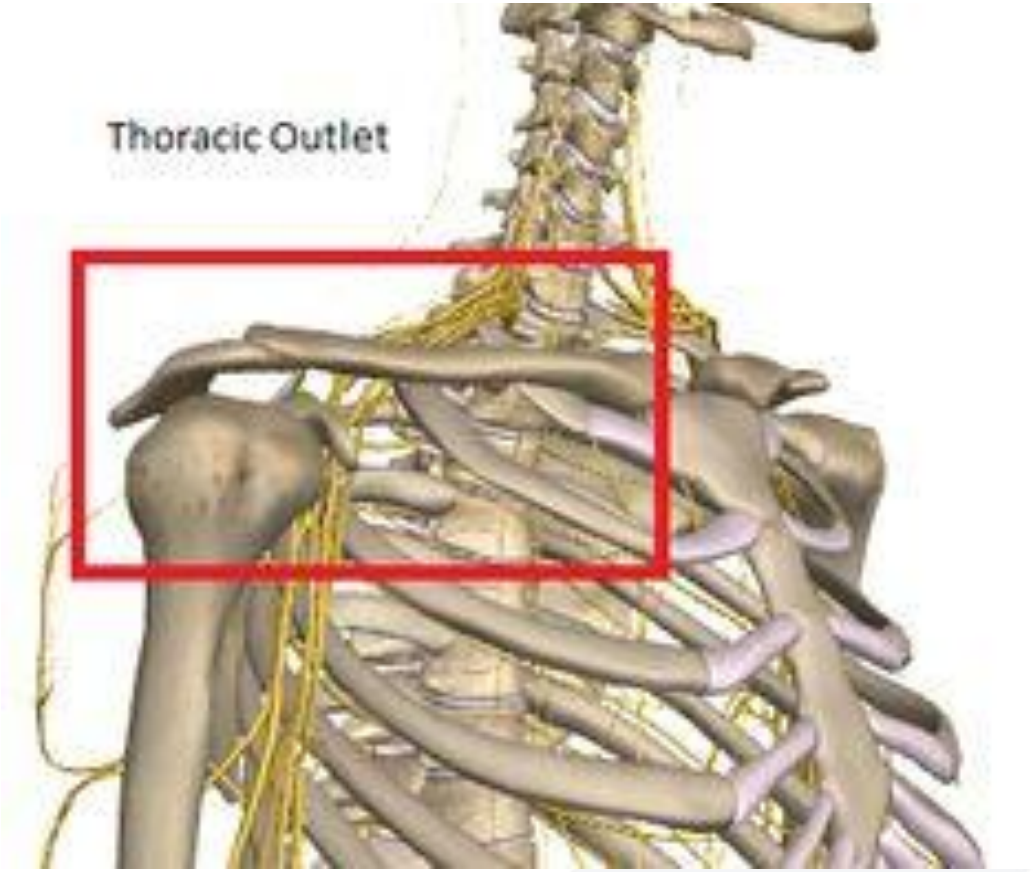


Ipsilateral	Posterior Spiral Subsystem	Action	Prime Mover
		Toe Extension	Extensor Hallicus Longus
		Plantar Fascial Spring	Plantar Aponeurosis
		Posterior Leg Fascial Spring	Achilles Tendon
		Ankle Flexion	Soleus
		Ankle Eversion	Peroneus Longus
		Plantar Flexion/Inversion	Tibialis Posterior
		Knee Extension	Vastus Lateralis
		Lateral Fascial Spring	Iliotibial Band
	Posterior Spiral Subsystem	Hip Extension/External Rotation	Gluteus Maximus
	Posterior Spiral Subsystem	Hip Abduction	Gluteus Medius
	Posterior Spiral Subsystem	Sacrum Stabilization	Sacroiliac Joint
Contralateral	Posterior Spiral Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
	Posterior Spiral Subsystem	Trunk Rotattion	Latisimus Dorsi
		Neck Rotation/Stabalization	SCM
Ipsilateral	Posterior Spiral Subsystem	Neck Rotation/Stabalization	Slpenius Capitus
Contralateral		Humeral Extension/Stabalization	Posterior Deltoid
		Elbow Extension	Triceps
		Wrist Adduction	Extensor Carpi Ulnaris
		Finger Adduction	Lumbricals

Upper Rib/Wrist

Thoracic outlet

- Anterior cervical fascia
- Upper Ribs
- Subclavius and Coracobrachialis muscles
- Costo coracoid/clavicular ligaments
- Bicep Tendon



Anterior Spiral

Ipsilateral	Anterior Spiral Subsystem	Action	Primer Mover
		Toe Flexor	Flexor Hallicus Longus
		Ankle Dorsiflexion	Tibialis Anterior
		Ankle Eversion	Peroneus Longus
		Knee Flexion	Biceps Femoris
	Anterior Spiral Subsystem	Hip Flexion/Stabalization	Adductor Longus
		Hip Flexion/Lumbar Stabalization	Iliacus
	Anterior Spiral Subsystem	Trunk Stabalization Flexion (PITCH)	Rectus Abdominus
	Anterior Spiral Subsystem	Trunk Stabalization Rotation (YAW)	Internal Oblique
Contralateral	Anterior Spiral Subsystem	Trunk Stabalization Lateral Flexion (ROLL)	External Oblique
Ipsilateral		Neck Rotation/Stabalization	SCM
Contralateral		Neck Rotation/Stabalization	Splenis Capitus
		Scapular Protraction/Stabalization	Serratus Anterior
		Humeral Extension/Adduction	Pectoralis Major
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radislis Longus
		Finger Abduction	Dorsal Interossei

Deep Longitudinal

Ipsilateral	Deep Longitudinal	Action	Prime Mover
		Toe Flexor	Flexor Hallicus Longus
	Deep Longitudinal Subsystem	Ankle Dorsiflexion	Tbialis Anterior
	Deep Longitudinal Subsystem	Ankle Eversion	Peronus Longus
	Deep Longitudinal Subsystem	Knee Flexion	Biceps Femoris
		Knee Extension	Rectus Femoris
		Hip Adduction	Adductor Magnus
		Hip Abduction	Gluteus Medius
		Lateral Fascial Spring	Iliotibial Band
	Deep Longitudinal Subsystem	Pelvic Stablaization	Sacrotuberous Ligament
	Deep Longitudinal Subsystem	Sacral Stabalization	Sacroiliac Joint
	Deep Longitudinal Subsystem	Dorsal Fascial Spring	Thoracolumbar Fascia
Contralateral	Deep Longitudinal Subsystem	Torso Extension/Stabalization	Erector Spinae
		Neck Rotation/Stabalization	Upper Trapezius
		Scapular Protraction	Serratus Anterior
		Humeral Adduction	Pectoralis
		Humeral Abduction	Middle Deltoid
		Elbow Flexion	Brachialis
		Wrist Abduction	Extensor Carpi Radialis Longus
		Finger Abduction	Abductor Pollicis

Visual Inspection

ARCH TYPE — FOOT ALIGNMENT

NORMAL ARCH

NEUTRAL ALGNMENT

HIGH ARCHED PRINT

SUPINATOR-ROLLS

TO OUTSIDE/LATERAL

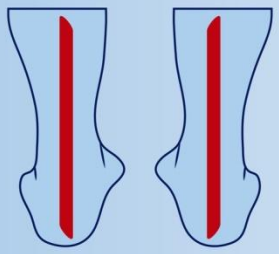
FLATFOOT PRINT

PRONATOR-ROLLS TO

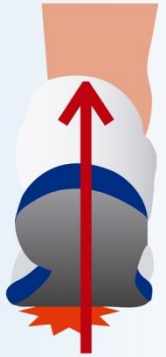
INSIDE/MEDIAL

ARCH TYPE & FOOT ALIGNMENT

NORMAL ARCH

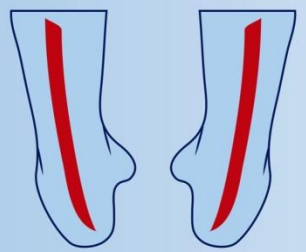


NEUTRAL ALIGNMENT



HIGH ARCHED PRINT

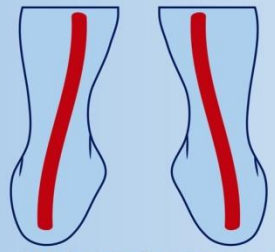
SUPINATOR-ROLLS



TO OUTSIDE/LATERAL

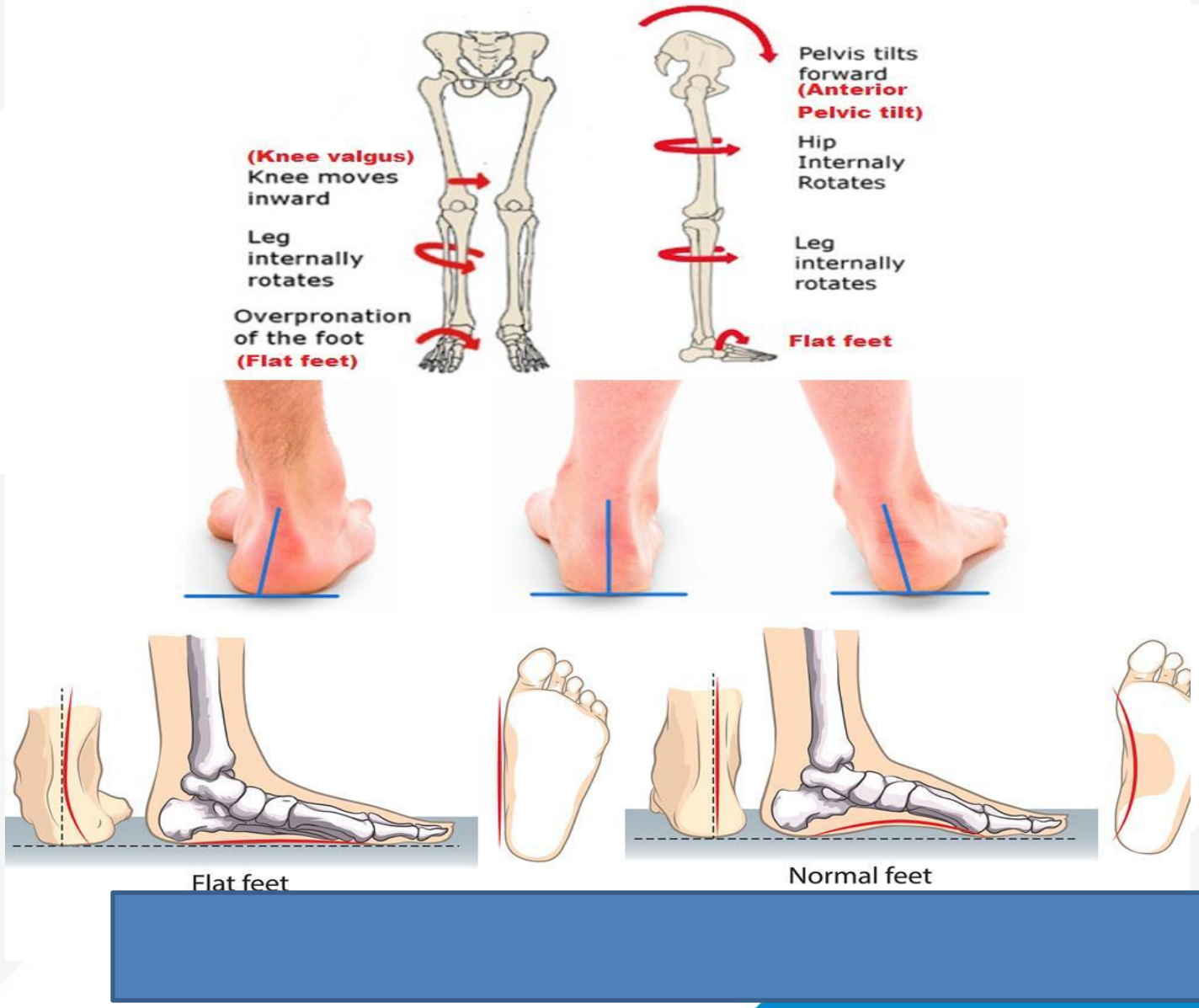
FLATFOOT PRINT

PRONATOR-ROLLS TO

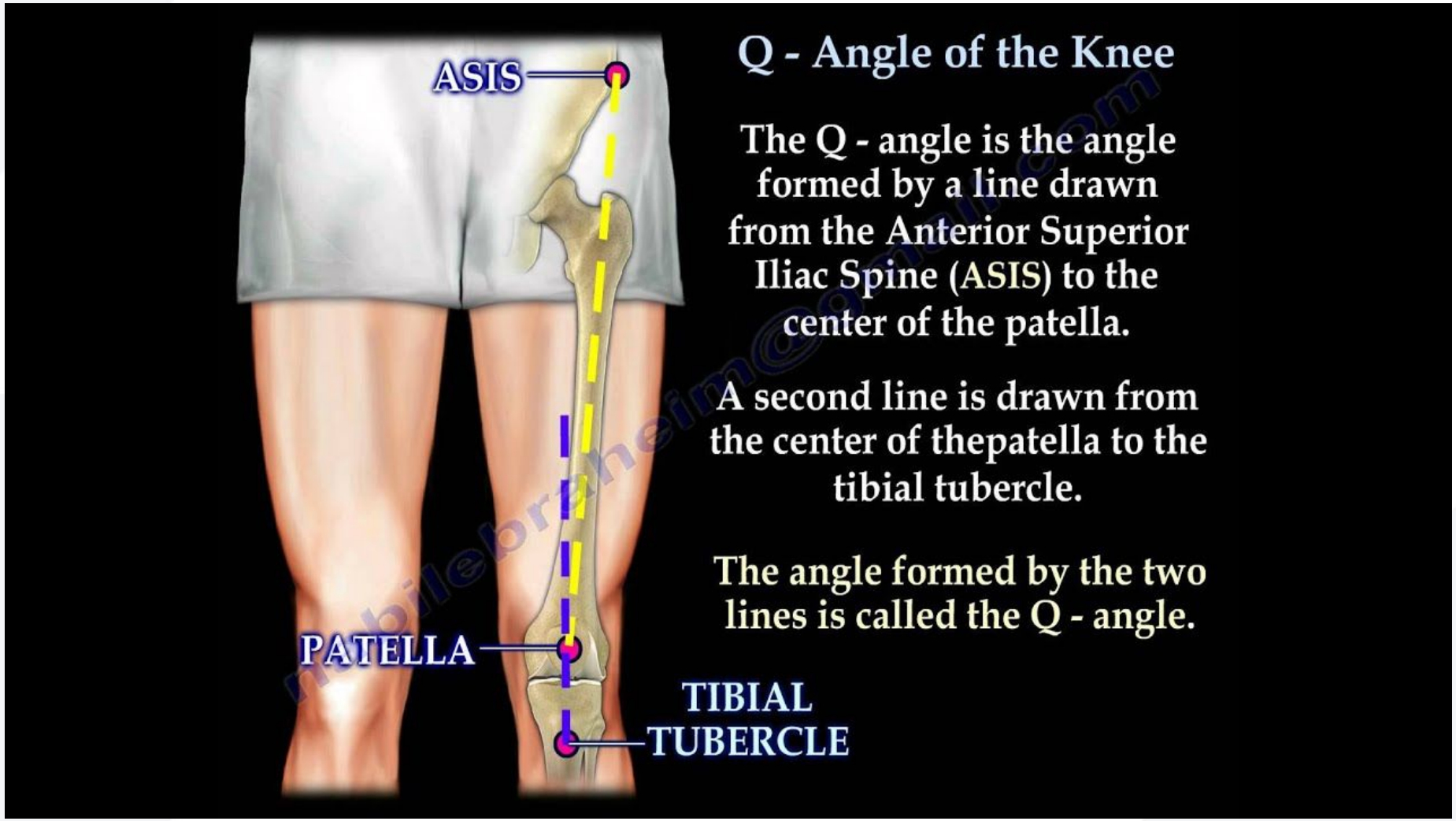


INSIDE/MEDIAL

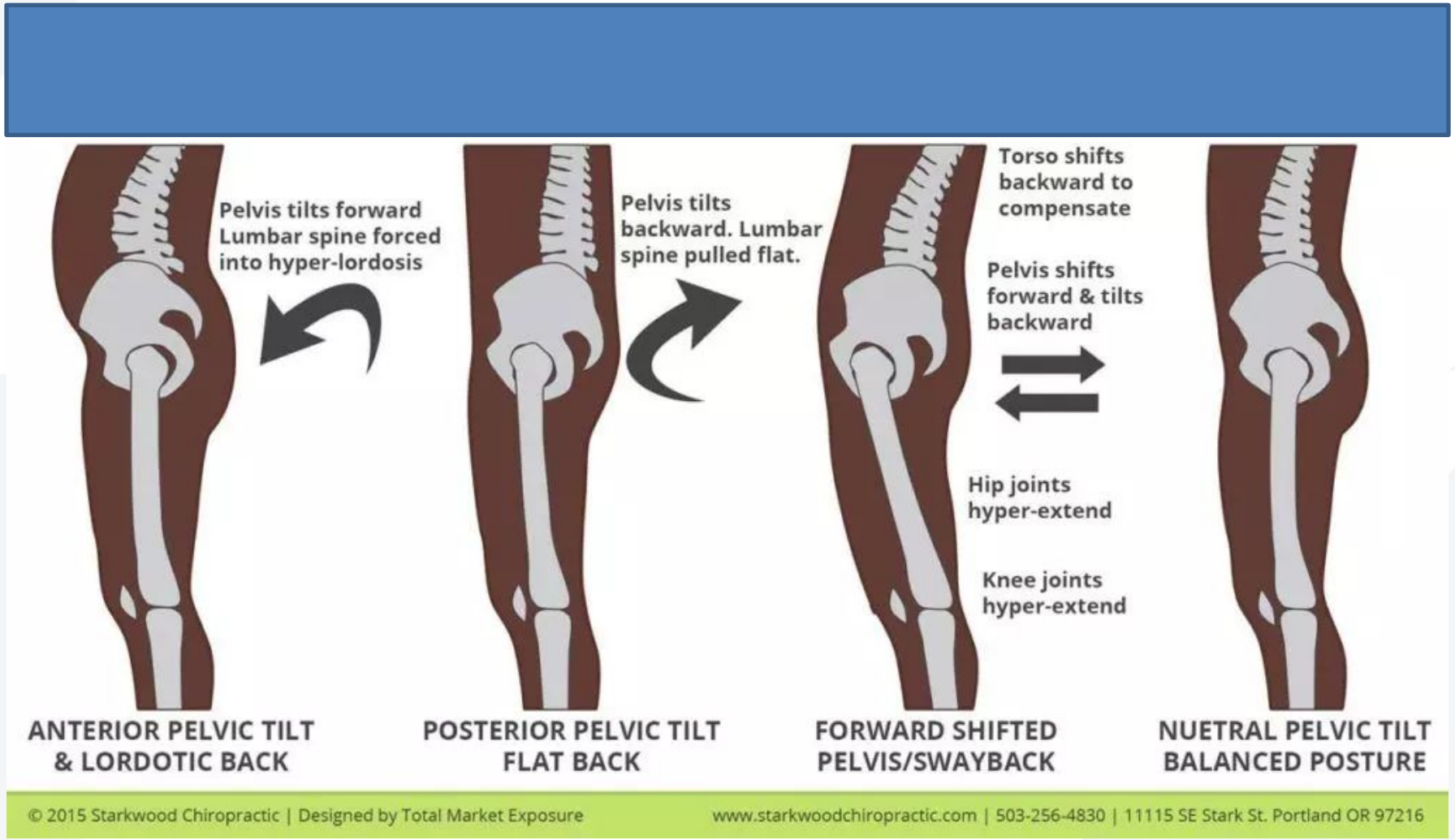
Achilles Tendon



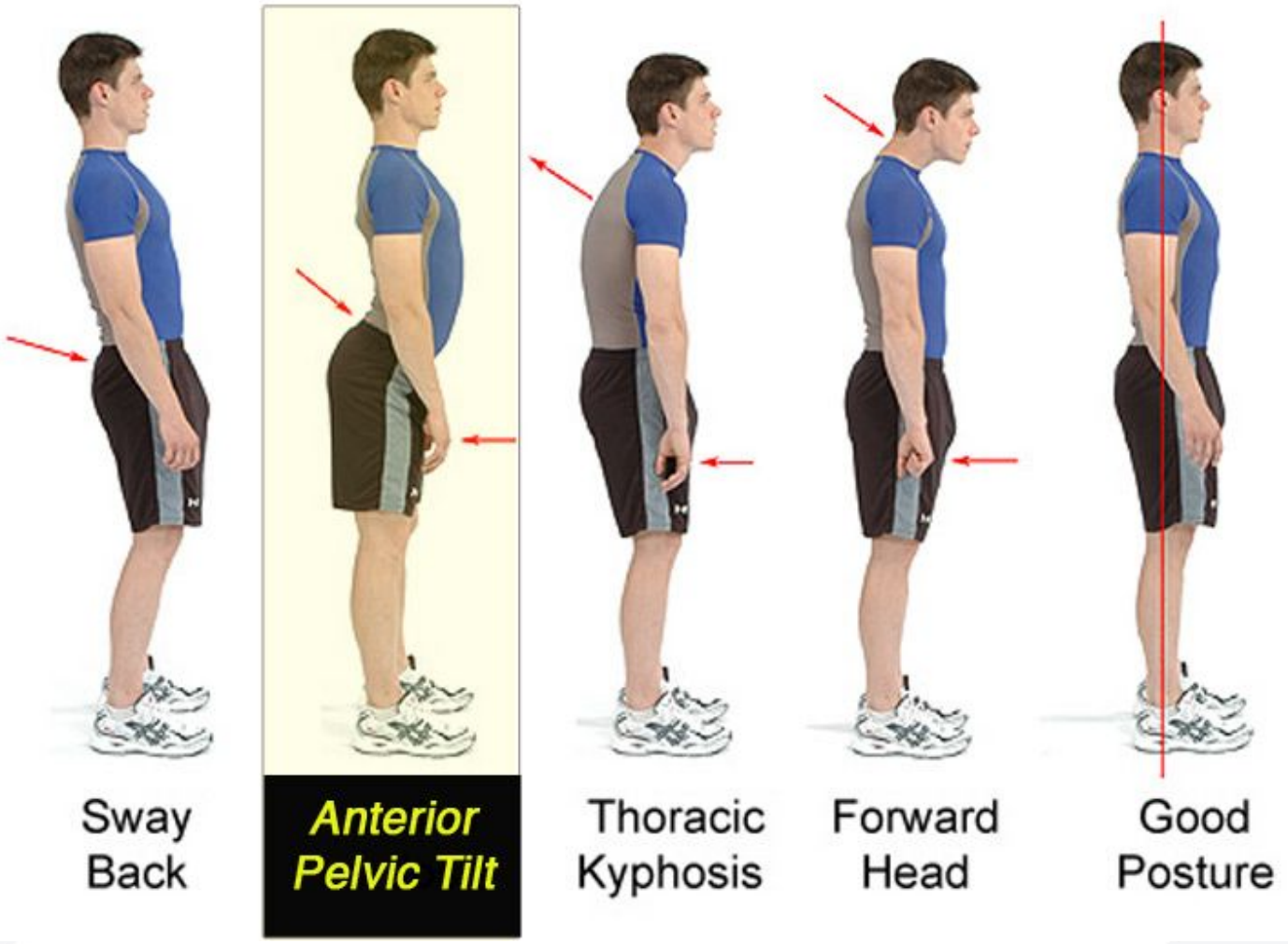
Q-Angle of the Knee



Pelvic Tilt and Posture

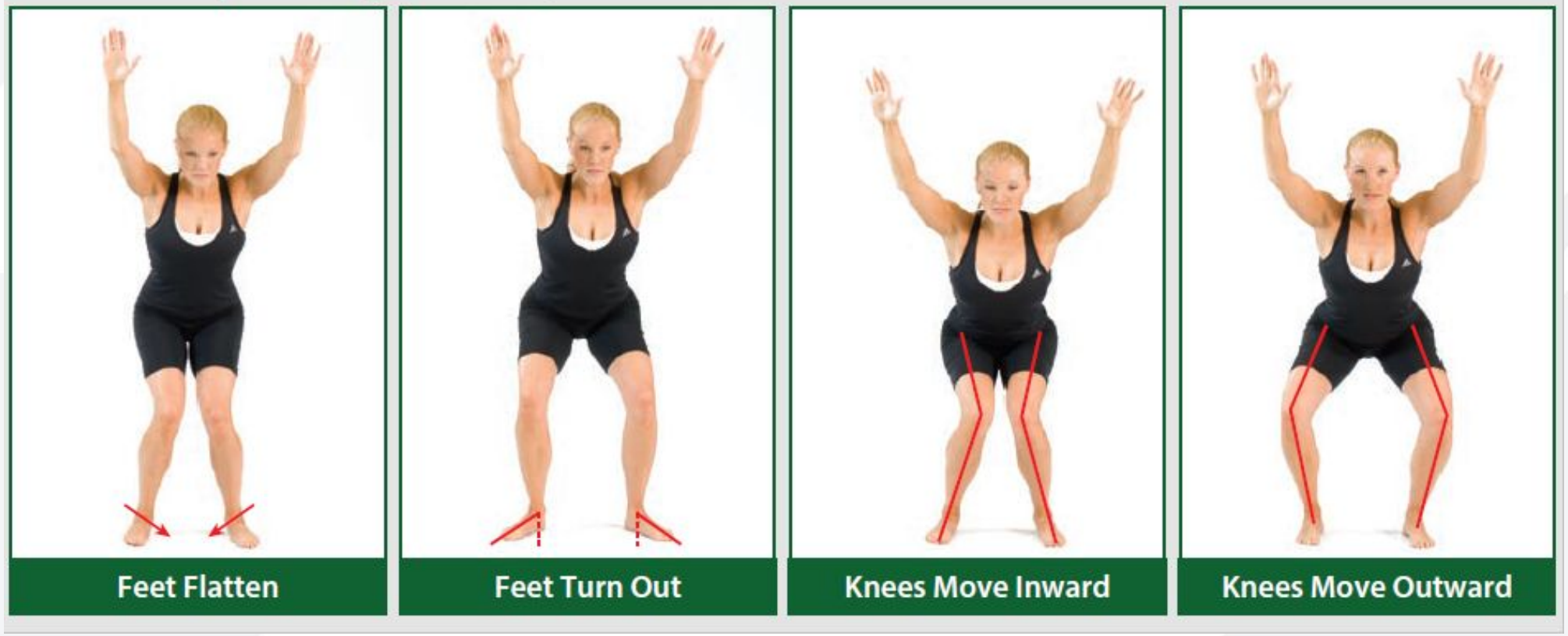


Pelvic Tilt and Posture

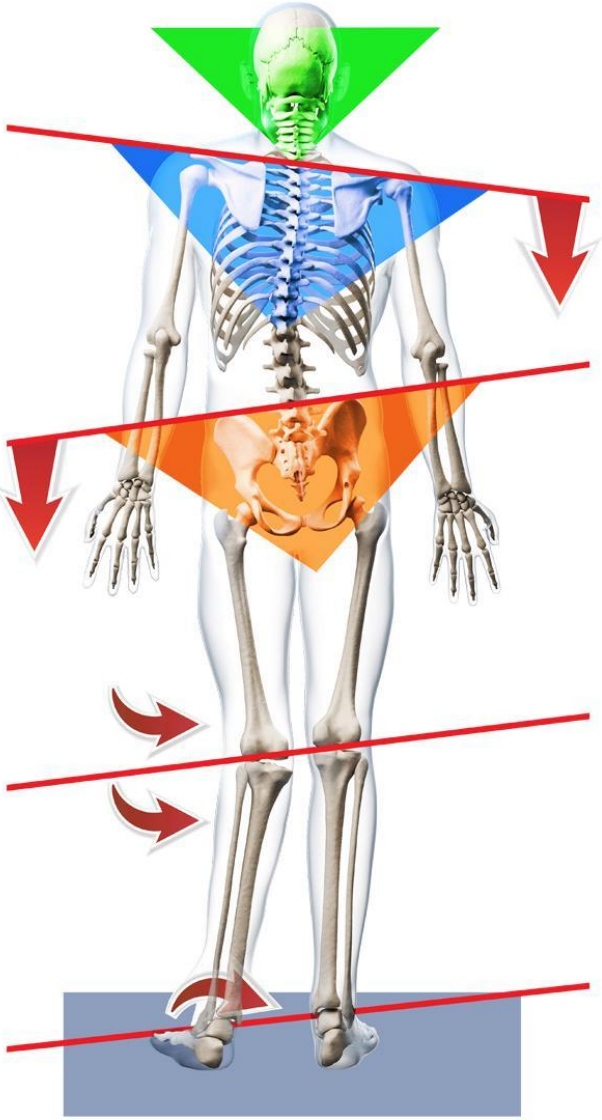


Squat Test

Overhead Squat Compensations, Anterior View

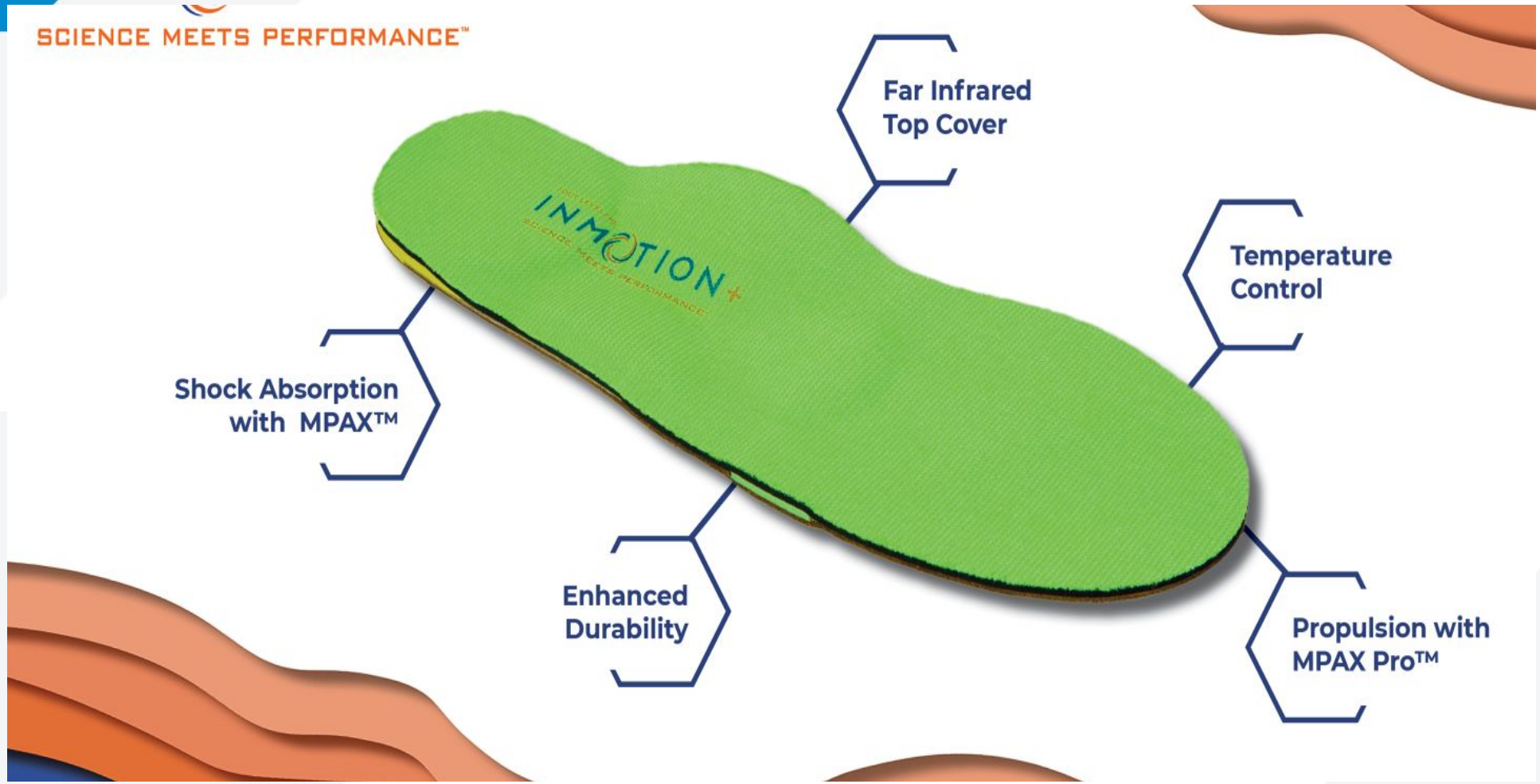


Everyone is Crooked Man

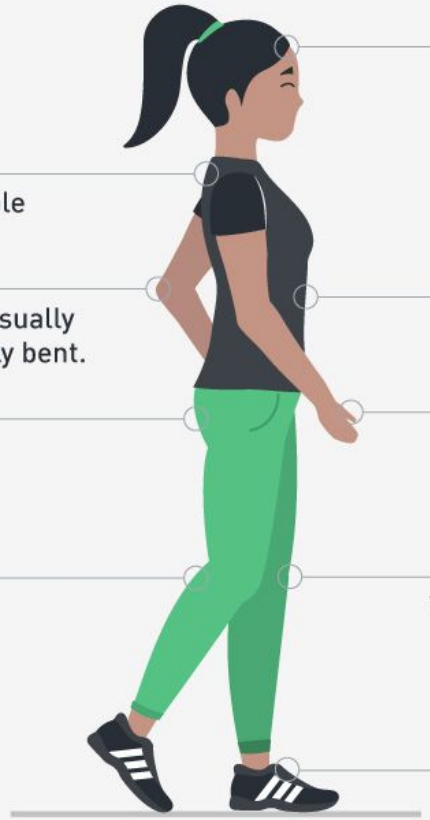


FOOT LEVELERS

SCIENCE MEETS PERFORMANCE™



Walking Evaluation



Hold your head up straight: just look straight ahead and keep your chin parallel to the ground.

Keep your shoulders straight and stable — don't let them hang forward.

Keep your core muscles slightly flexed while walking.

While walking, let your arms swing casually and naturally, with your elbows slightly bent.

Keep your thumbs pointing forward — this helps you keep your shoulders upright.

Slightly tense your glutes at the end of each and every step.

When shifting your weight to your front leg, stretch your knee forward.

The knee of your back leg should be slightly bent

Your feet should always be pointed forward.

Walking Evaluation

- Will walk up and down hallway 2 times
- Have something eye level for them to focus on
- Second time they walk towards you have them change their focal point midway to you and back to focal point a series of times

Walking Evaluation

- WALKING AWAY
  - Heel Strike
  - Toe off
  - Pelvis/Glutes
  - Scapulae
  - Arm Swing and Hand Placement
  - Head Tilt

Walking Evaluation

- WALKING TOWARD
  - Heel Strike
  - Toe off
  - Pelvis/Hip
  - Arm Swing and Hand Placement
  - Shoulders
  - Head Tilt

Walking Evaluation

- WALKING AWAY AGAIN
  - Heel Strike
  - Toe off
  - Pelvis/Glutes
  - Scapulae
  - Arm Swing and Hand Placement
  - Head Tilt

Walking Evaluation

- WALKING TOWARD WITH GAZE CHANGES
  - Heel Strike/Ankle/Toe off
  - Pelvis/Hip
  - Arm Swing and Hand Placement
  - Shoulders/Head Tilt

P N F

P N F

- **Proprioceptive Neuromuscular Facilitation** is an advanced form of flexibility training, which involves both the stretching and contracting of the muscle group being targeted.
- PNF stretching is one of the most effective forms of stretching for improving flexibility and increasing range of motion.

P N F

- Proprioceptive neuromuscular facilitation (PNF) was first developed by Margaret Knott PT, and Herman Kabat MD in the 1940's to treat neurological dysfunctions.
- This was an attempt to gain better control in a population of neurologically impaired instead of just offering the standard treatment at the time which was range of motion exercises and gait training.
- Treatment involved reeducation of developmental movements and postures which helped patients become more efficient in their movements and activities of daily living.

P N F

- Muscle recruitment is enhanced through the use of the appropriate reflex and proprioceptive stimuli. The efficient recruitment of motor patterns involves the use of the following PNF techniques:

P N F

- **The Role of the Stretch Reflex**
  The muscle spindle is a long thin nerve receptor found within the muscle. Information from this receptor transmits information to the spinal cord regarding muscle length and the speed of lengthening. When a muscle is stretched quickly this muscle spindle fires and causes a reflexive contraction within that muscle that is undergoing the stretch. The greater the speed of stretch, the stronger the reflex contraction in the muscle being stretched.
  Reciprocal Inhibition
  Inhibition of the antagonist muscle group is mediated by the muscle spindle. If the agonist muscle contracts, then the spindle fires, sending messages to the spinal cord causing the antagonist muscle to relax.
  Autogenic Inhibition
  The golgi tendon organ is a nerve receptor found in tendons. This receptor fires when tension increases within the tendon. This tension can be due to stretch or contracting muscle. When the golgi tendon organ fires a signal is sent to the spinal cord causing the agonist muscle to relax.
-

P N F

- Start out by choosing the muscle group you wish to be stretched and then position yourself so that the muscles are flexed and under tension (known as a passive stretch).
- Contract the stretched muscles (also known as isometric stretch) for 5-6 seconds while your training partner - or a stationary object - applies sustained resistance. The pressure of resistance should be sufficient enough to prevent movement.
- Relax the contracted muscle group and apply a controlled stretch for approximately 10 – 30 seconds. Allow at least 30 seconds for the muscles to recover and repeat the process around 2 to 4 times

P N F Precautions

- Aim for a stretch intensity and a contraction force of no more than about 5 or 6 out of 10.
- Must allow at least 30 seconds for the muscles to recover in between repetitions. This actually triggers the inverse myotatic reflex, a protective reflex, which prevents injury by calming the muscle.
- Warm-up prior to any stretching activity.
- Decreases performance in maximal effort exercises when completed prior to exercise.

PNF STRETCHING

HAMSTRING

1. Tighten your quad and relax your hamstring as your partner lifts your leg for 15 seconds
**QUAD MUST STAY TIGHT
(Knee bends= Too Far)

2. Relax the quad and tighten the hamstring as you push down against your partner's resistance for 15 seconds
**Quad Relaxed but Knee Stays Straight

3. Repeat Step 1 for 15 Seconds

CALF

1. Relax your calf as you tighten your Anterior Tibialis (shin muscle) as your partner pushes down on the ball of your foot for 15 seconds

2. Relax your Anterior Tibialis and tighten your calf as you push against your partners resistance for 15 seconds

3. Repeat Step 1

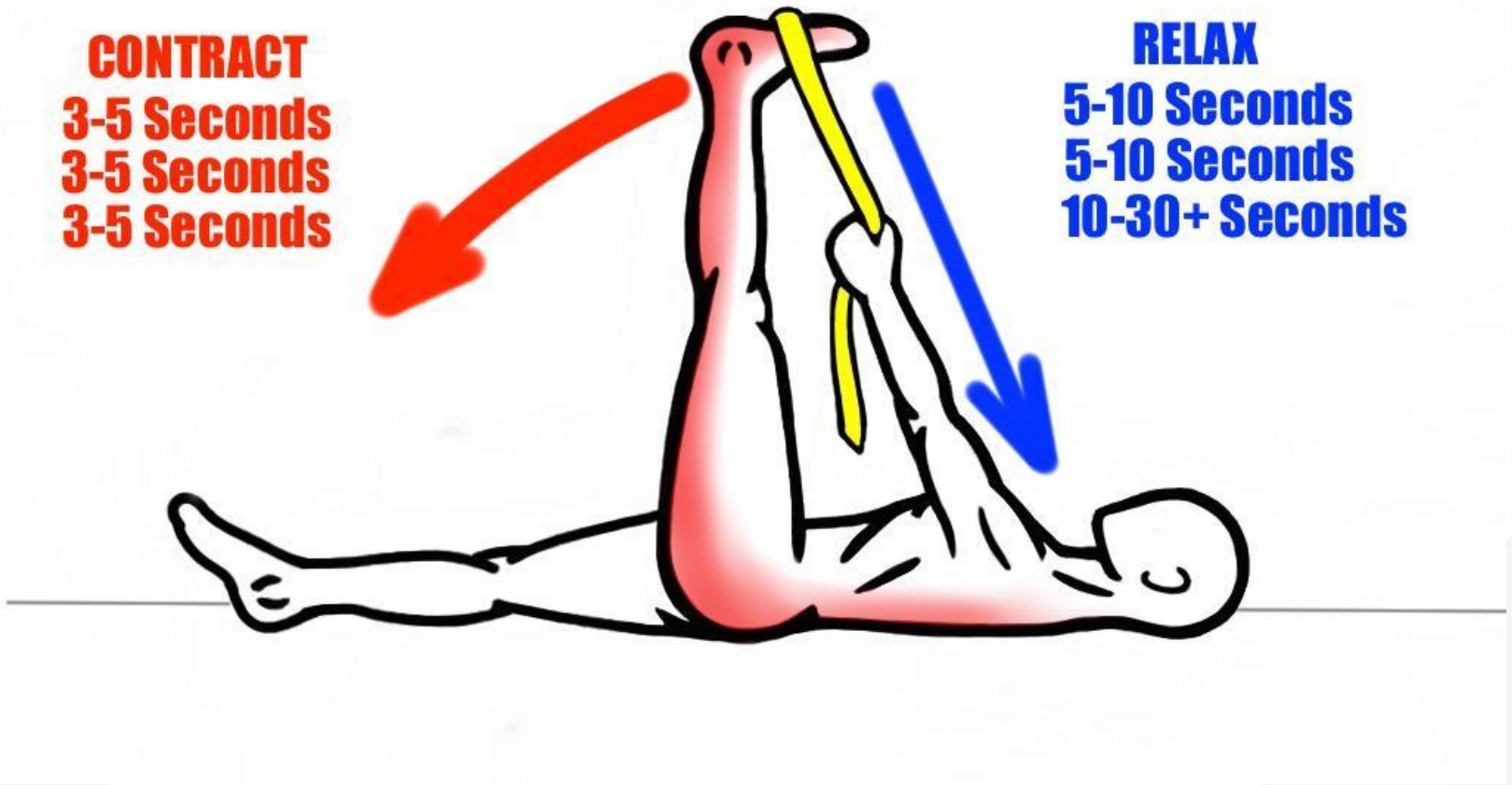
QUADRICEPS

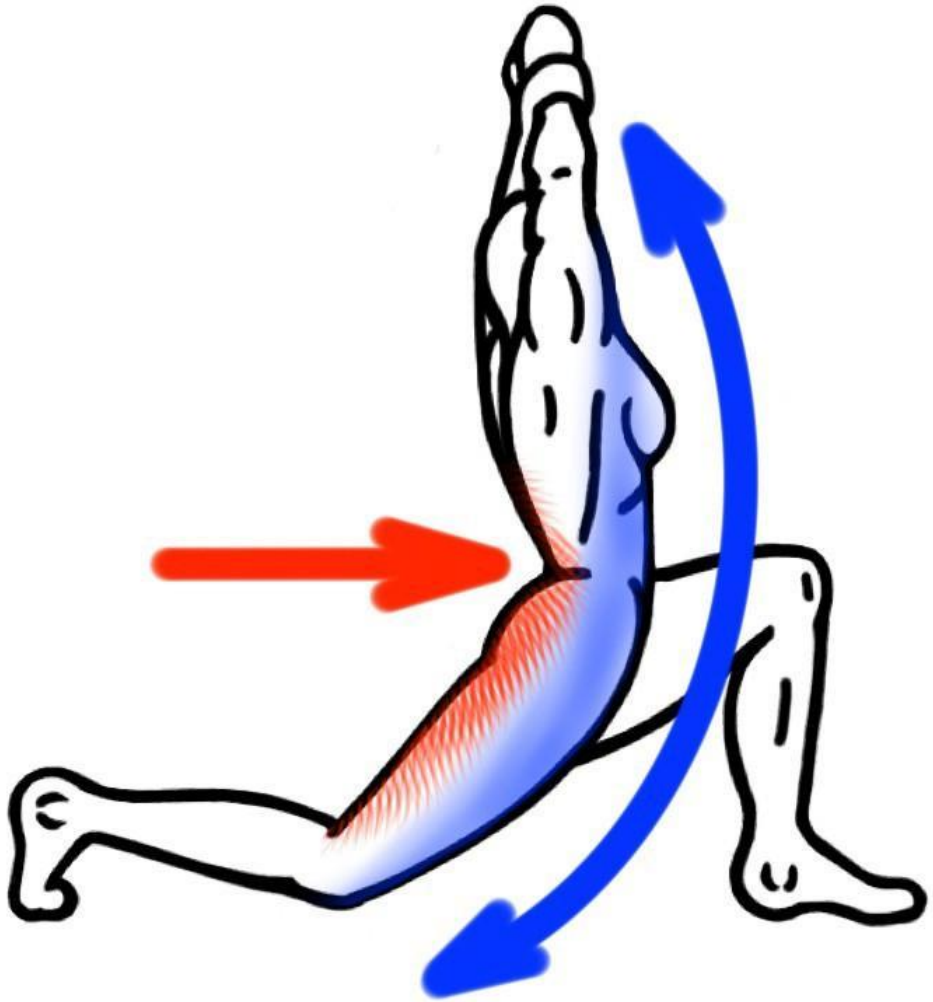
1. Relax your Quad as you tighten your Hamstring as your partner pushes your ankle towards your Glutes for 15 seconds

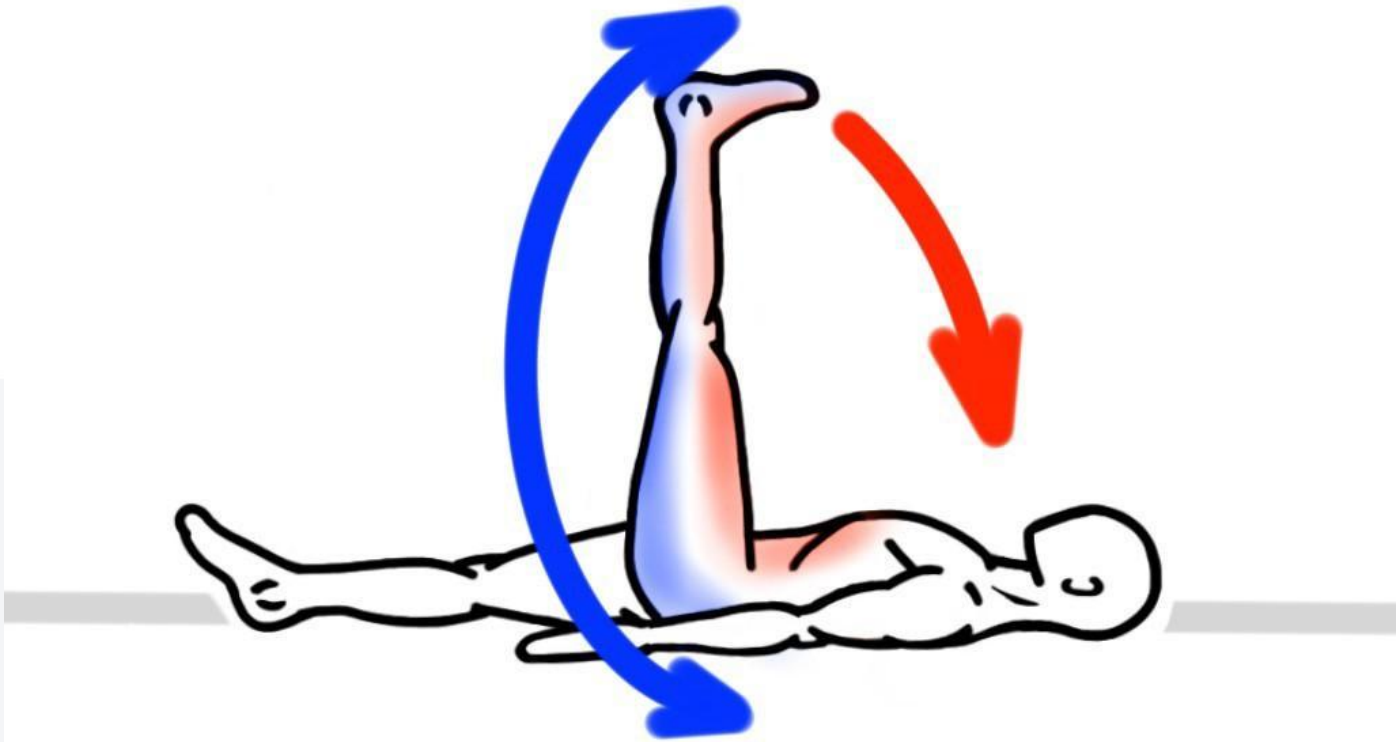
2. Relax your Hamstring and tighten your Quad as you push against your partners resistance for 15 seconds

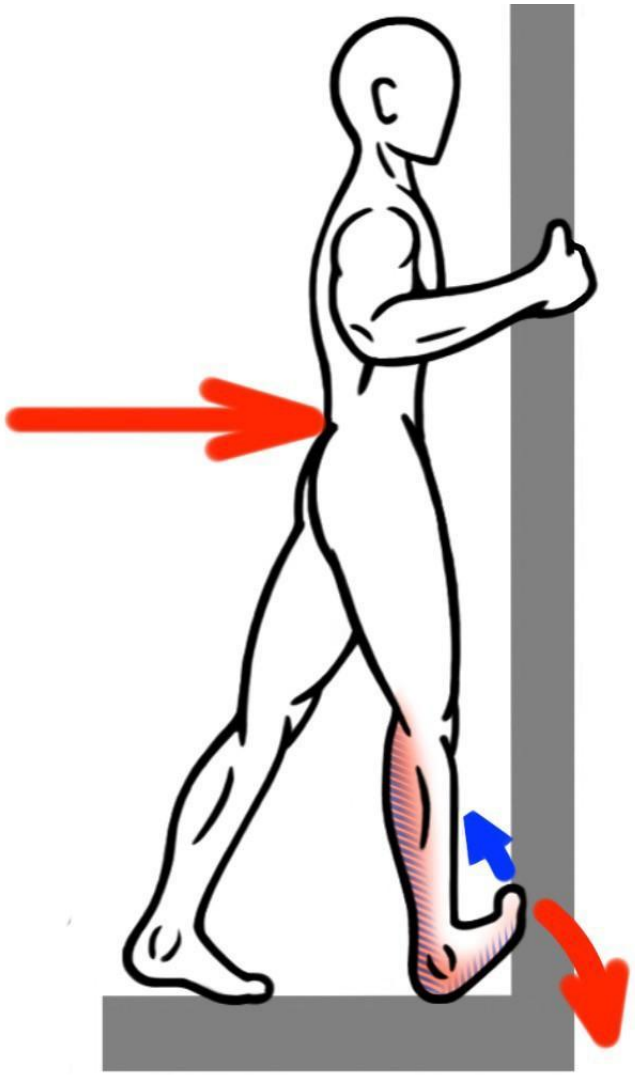
3. Repeat Step 1

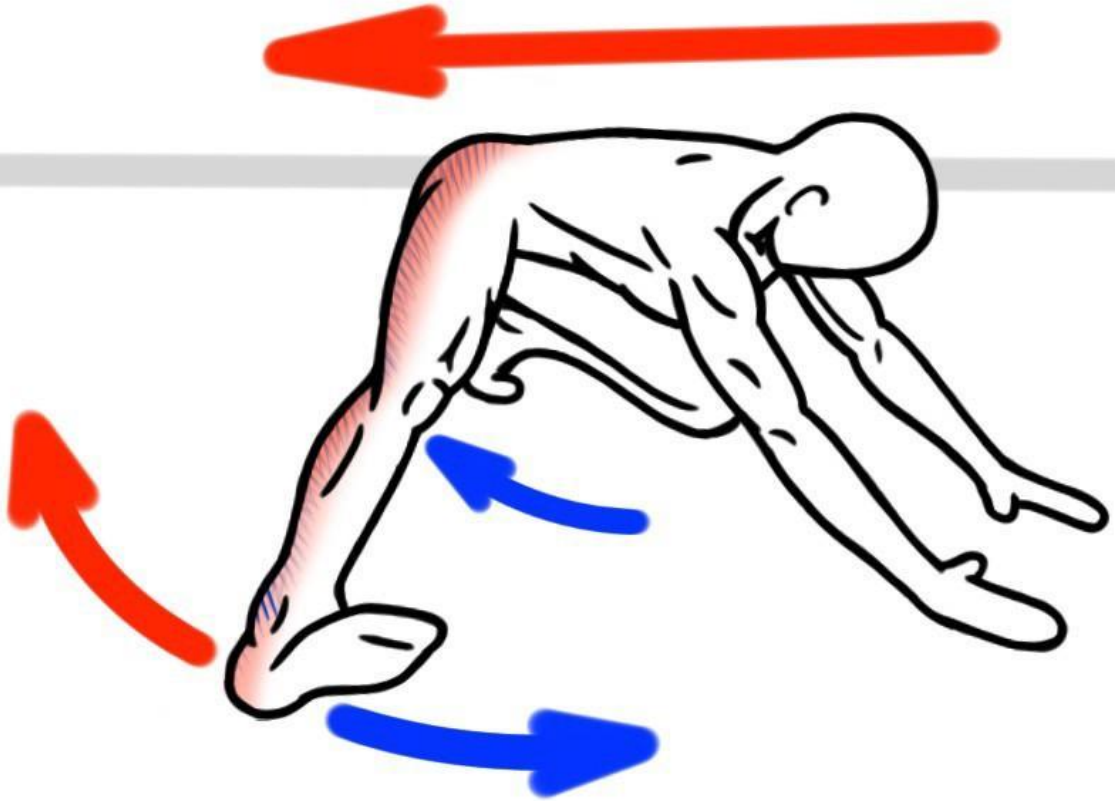
PNF Autogenic Inhibition

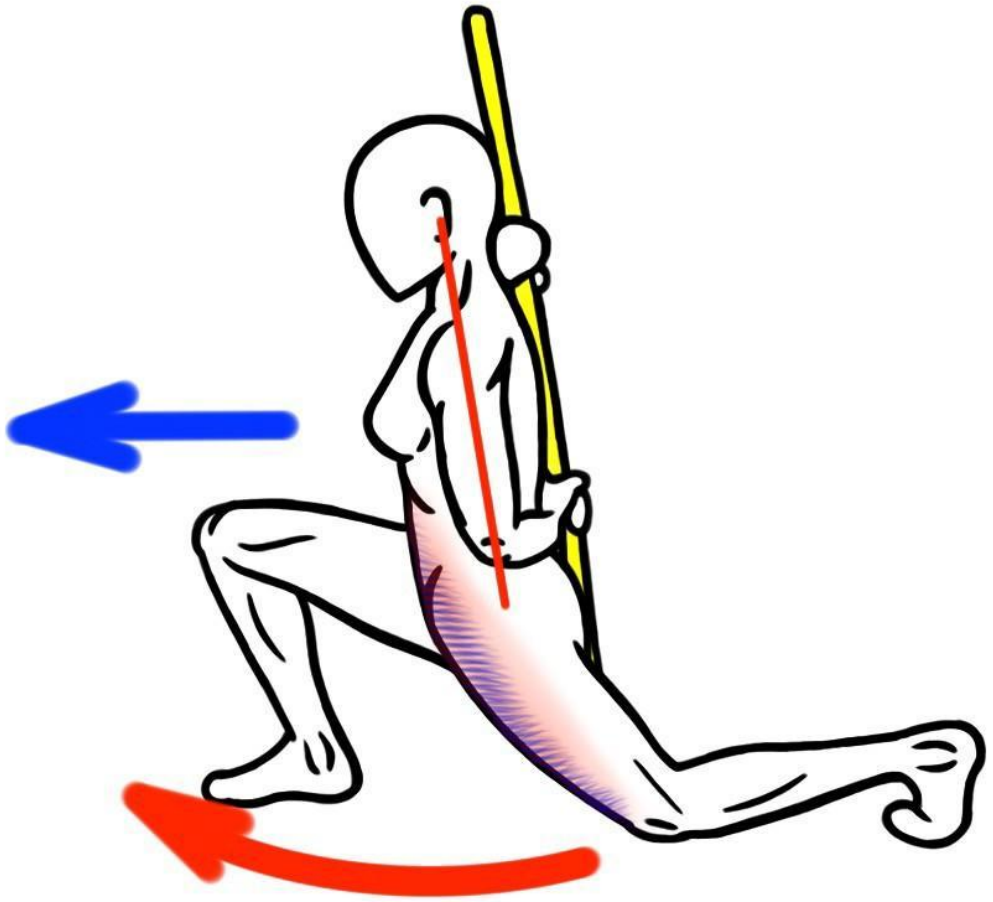


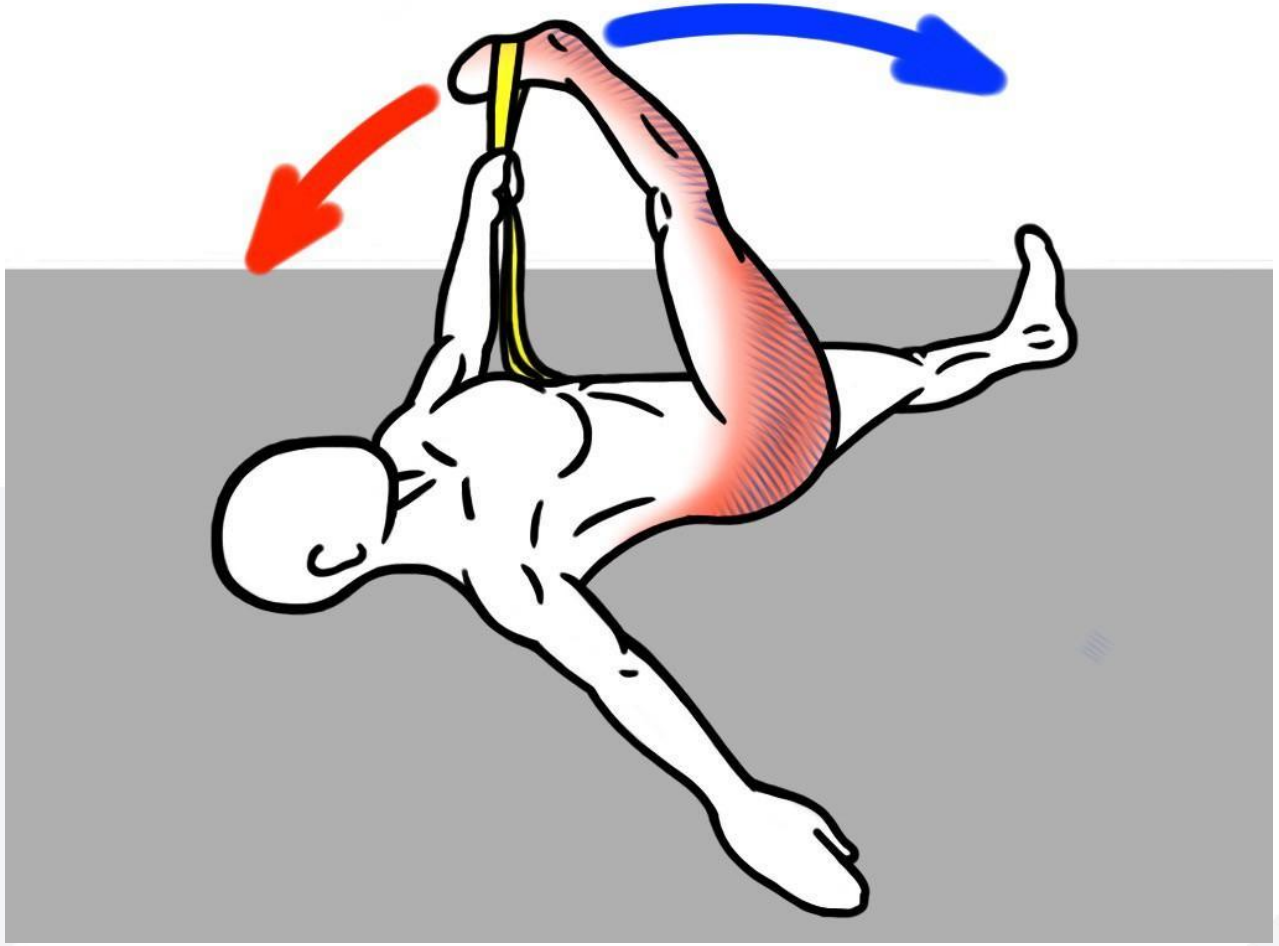


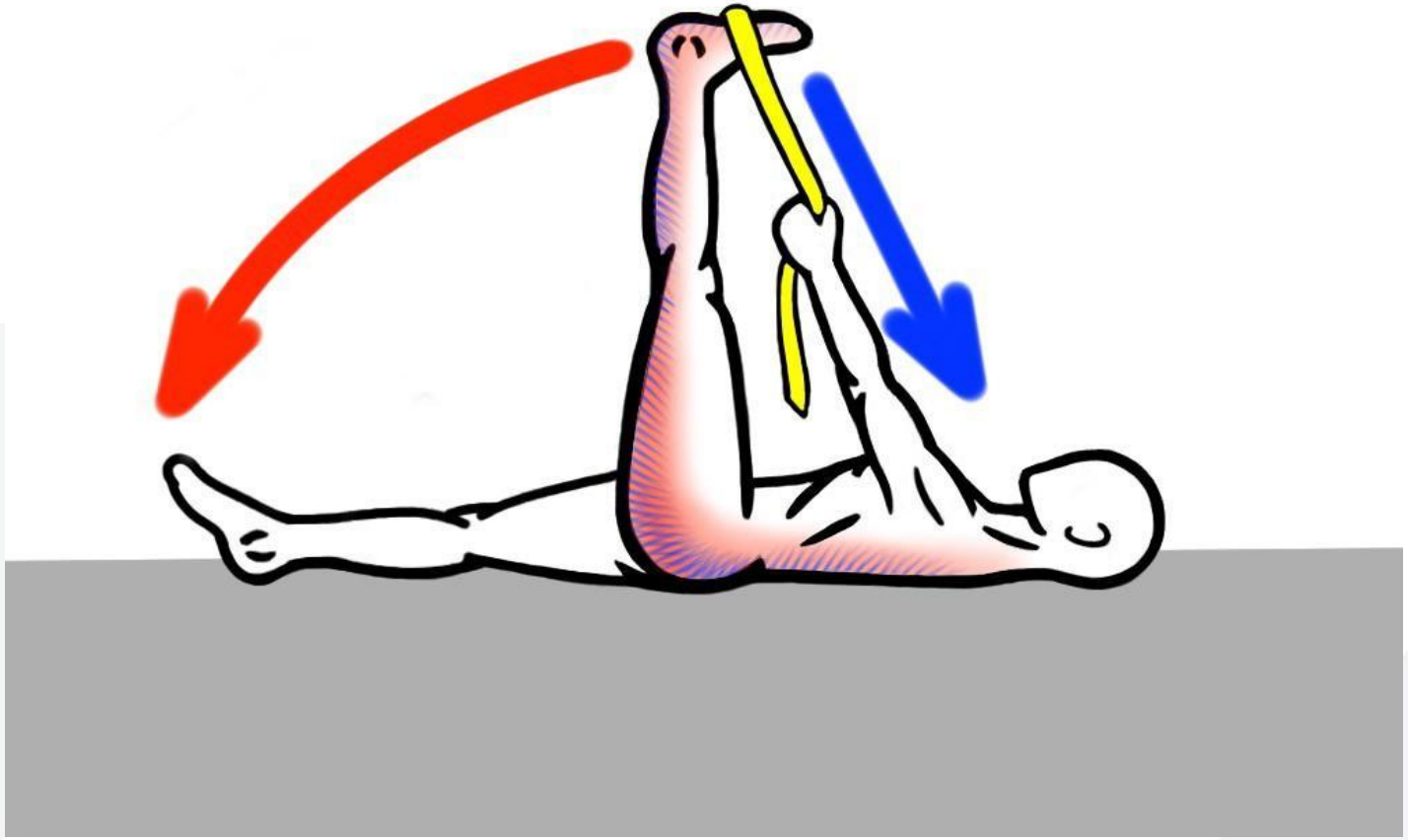


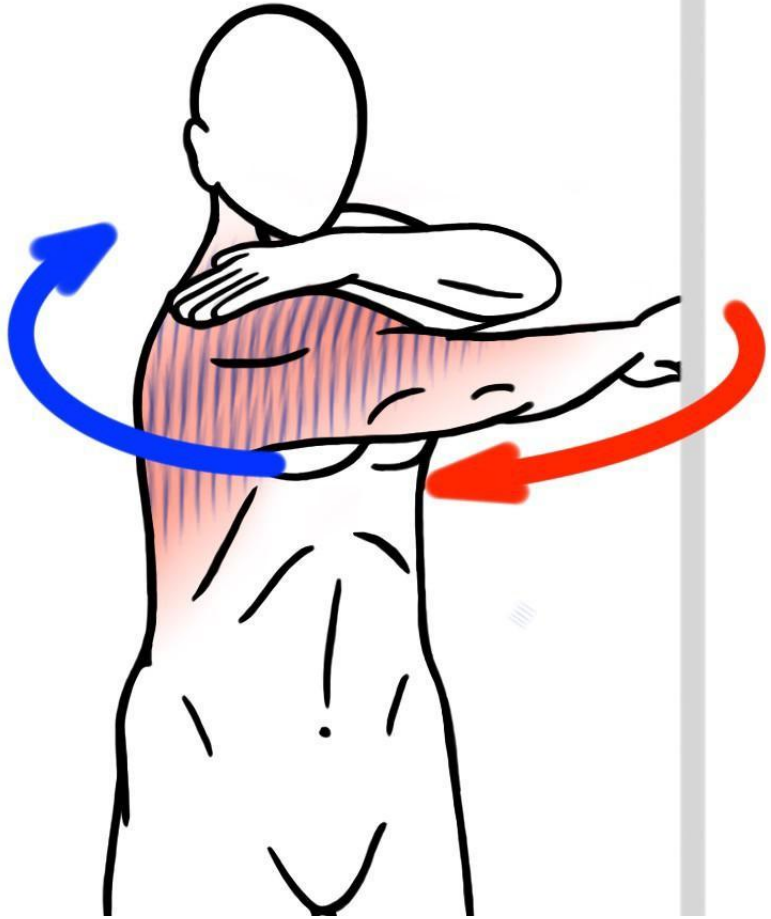


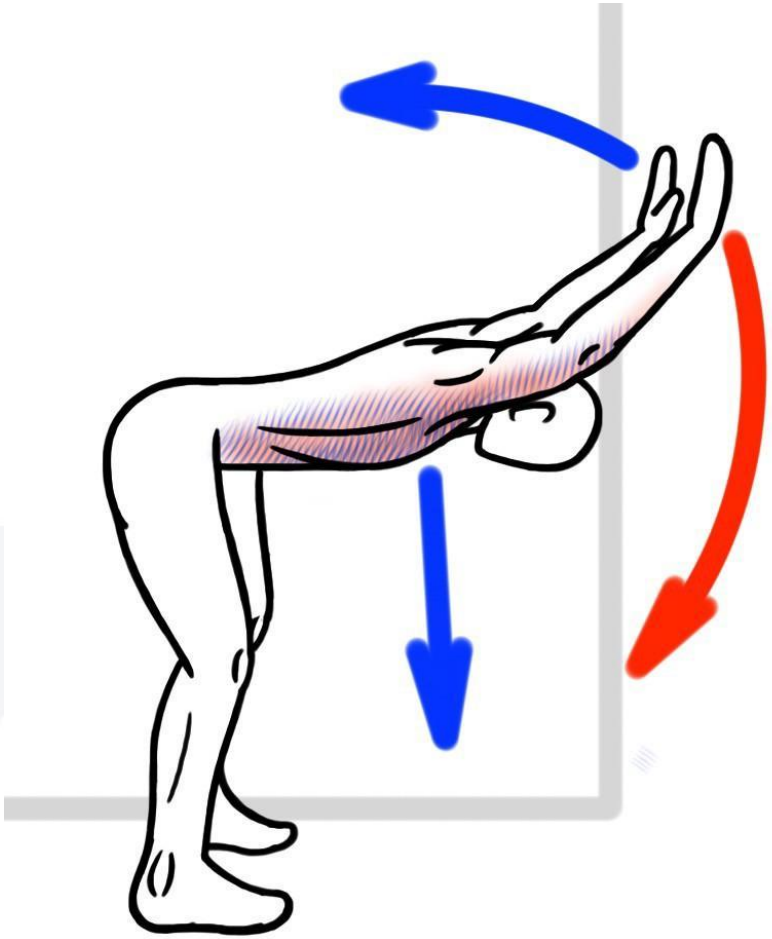




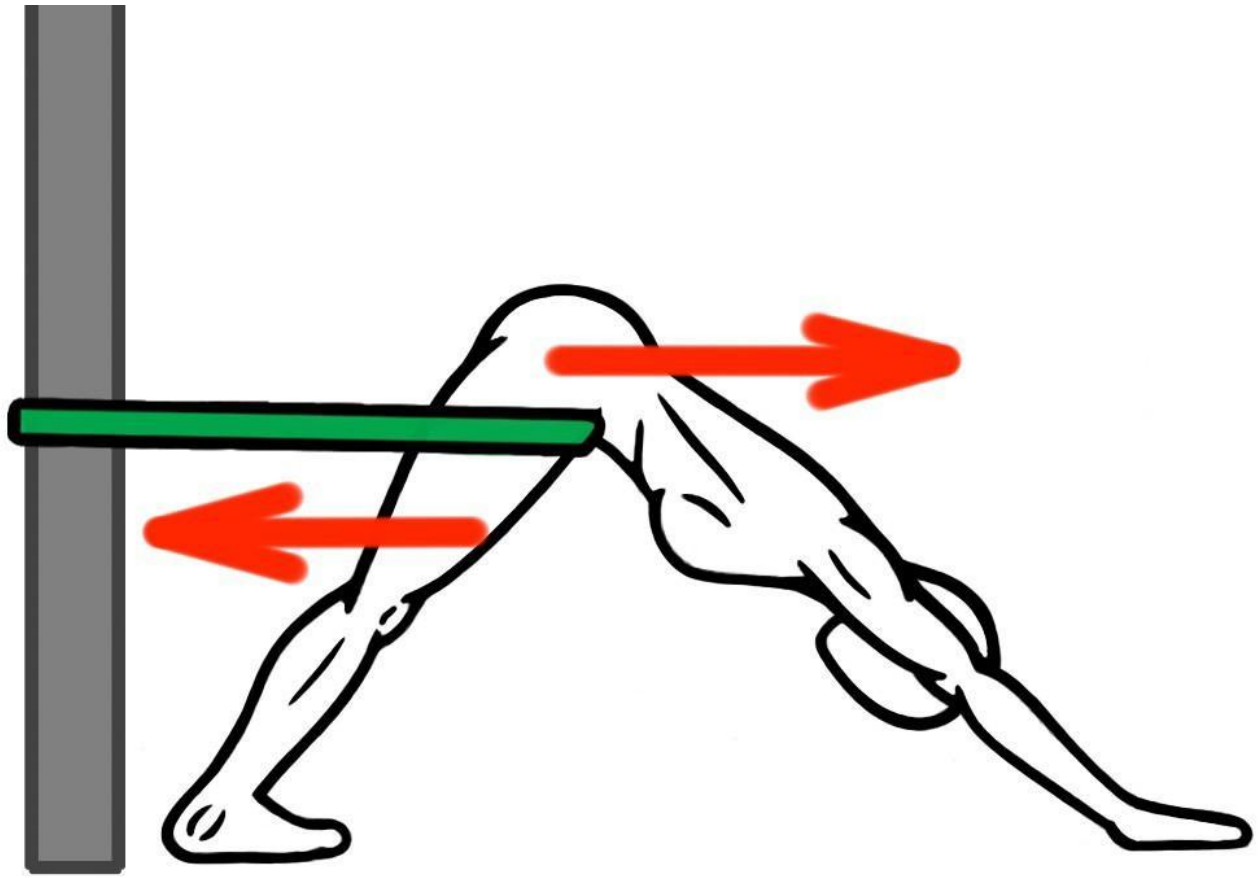


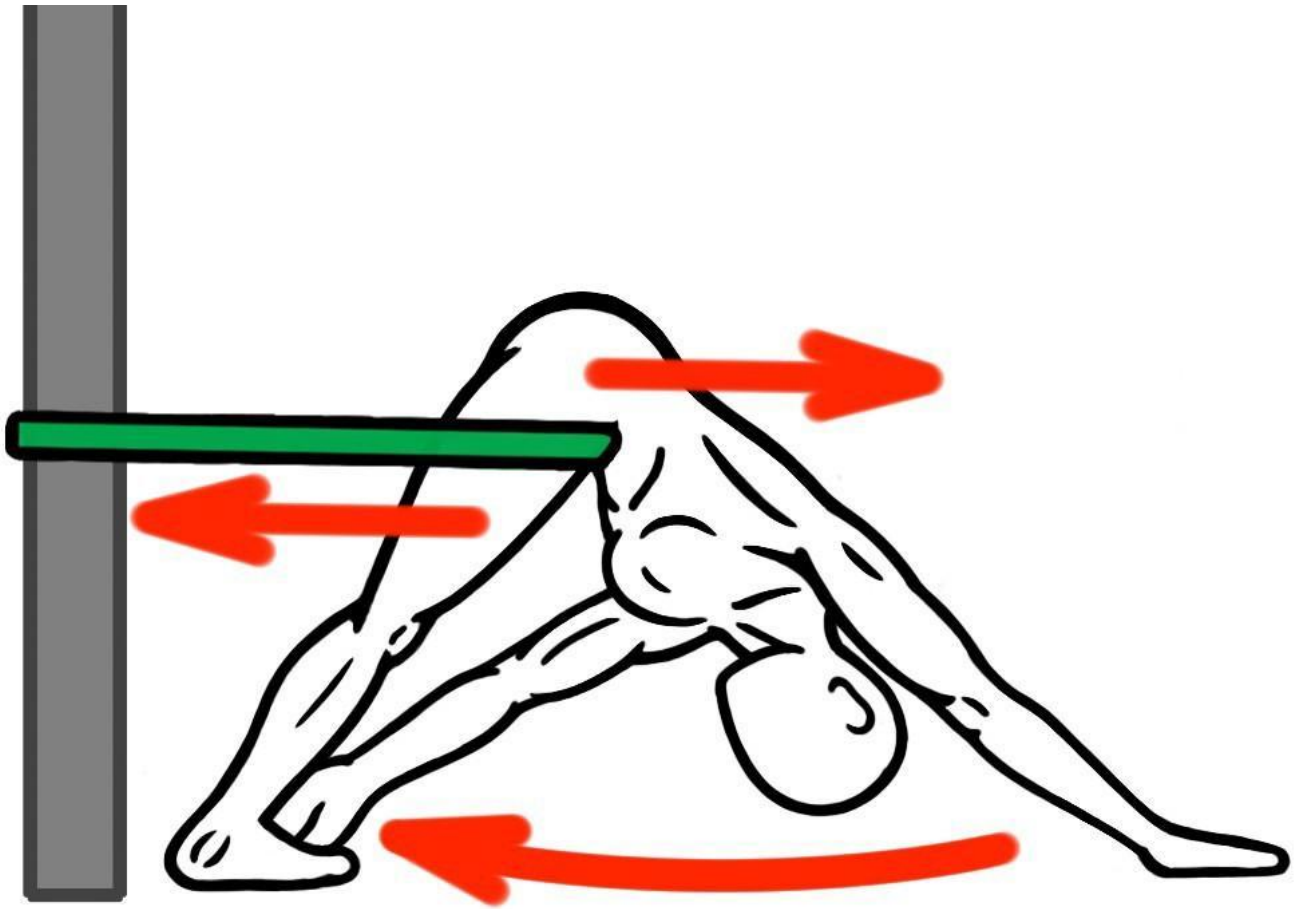


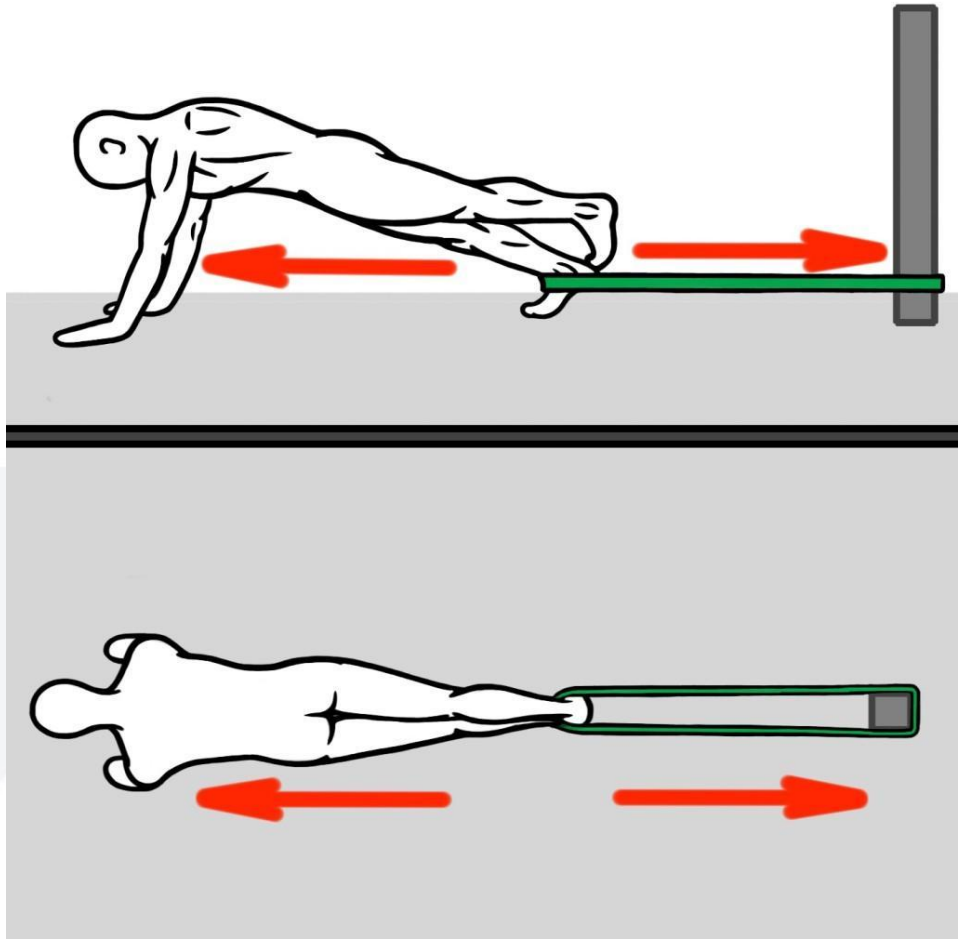


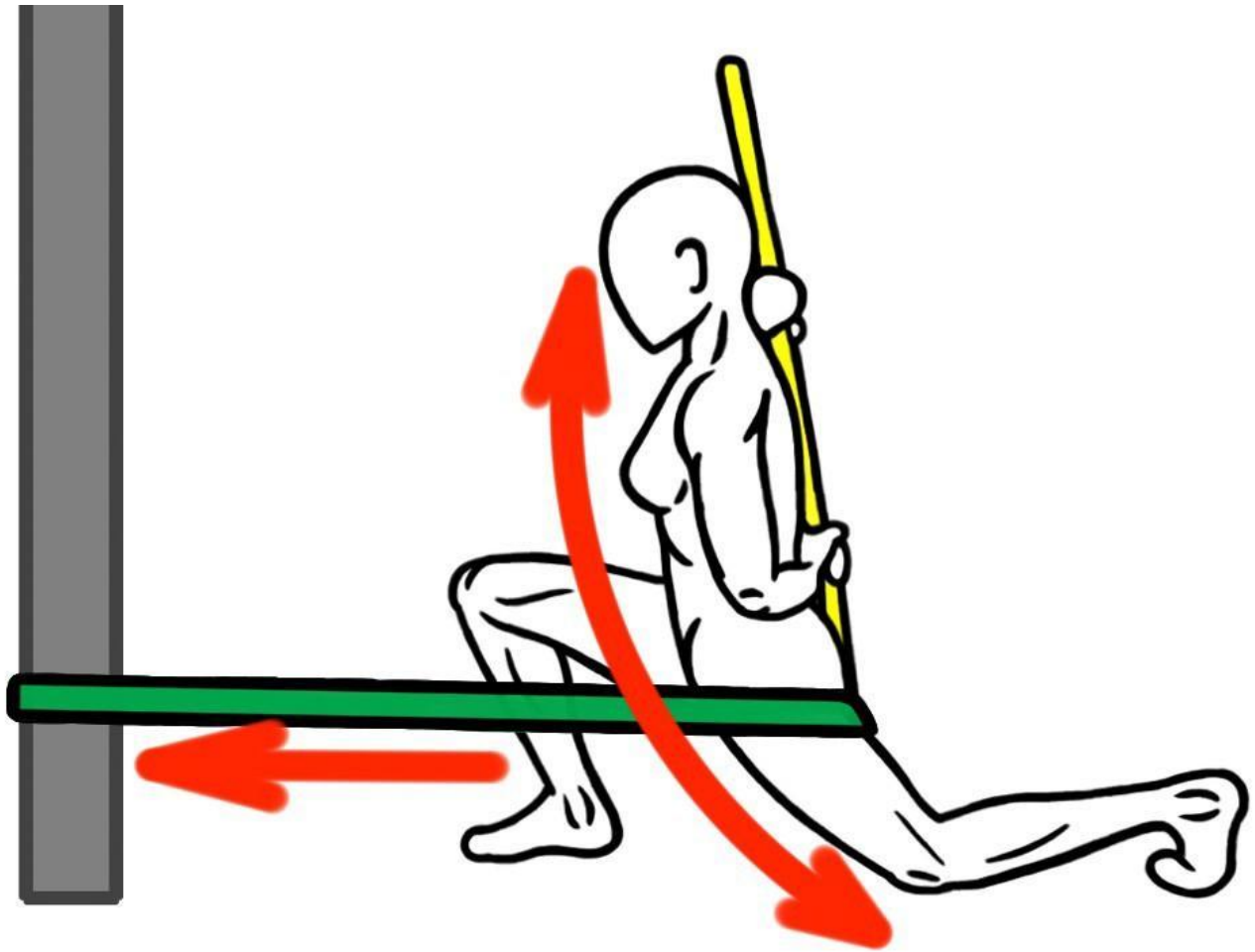


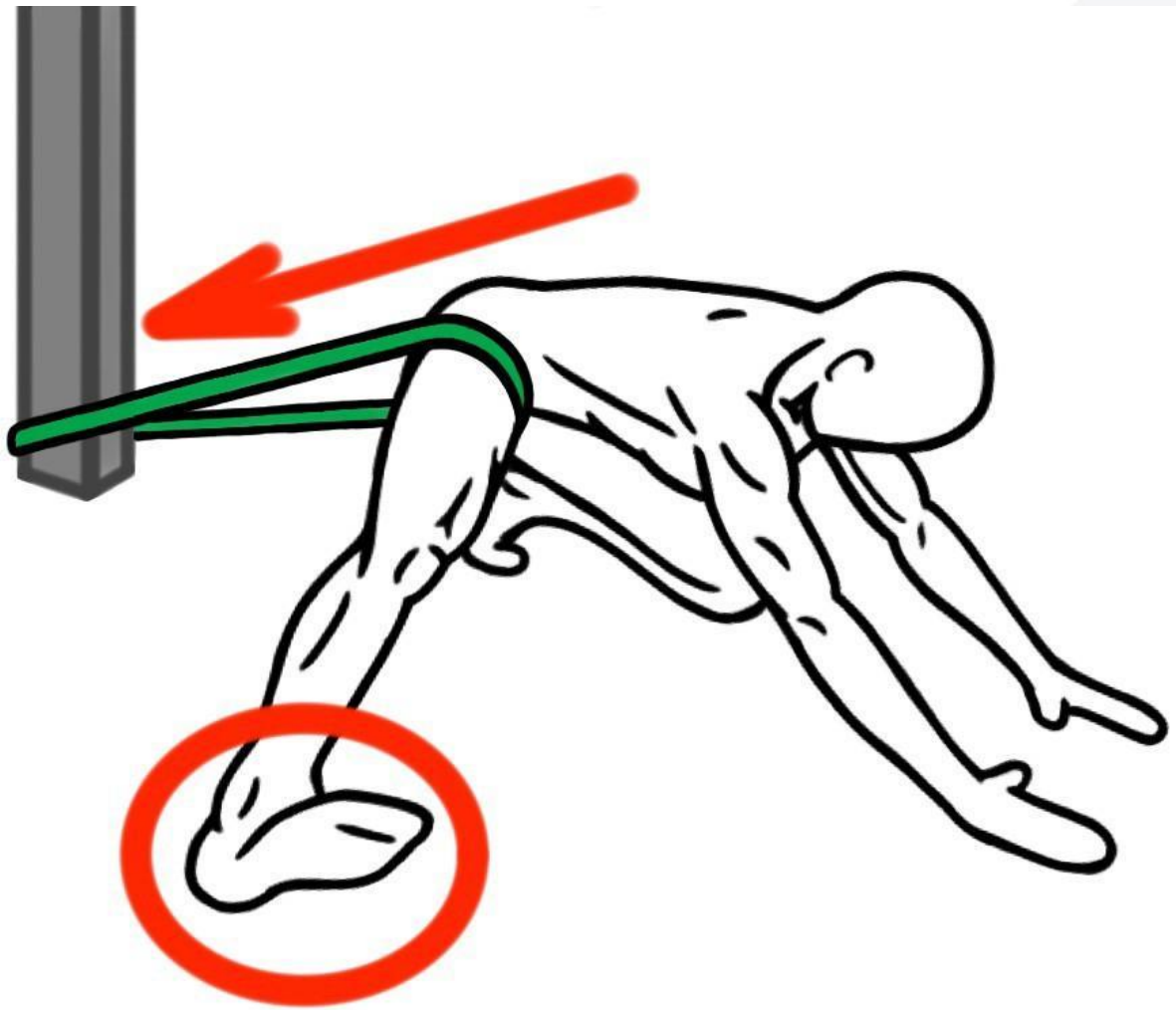
Advanced PNF

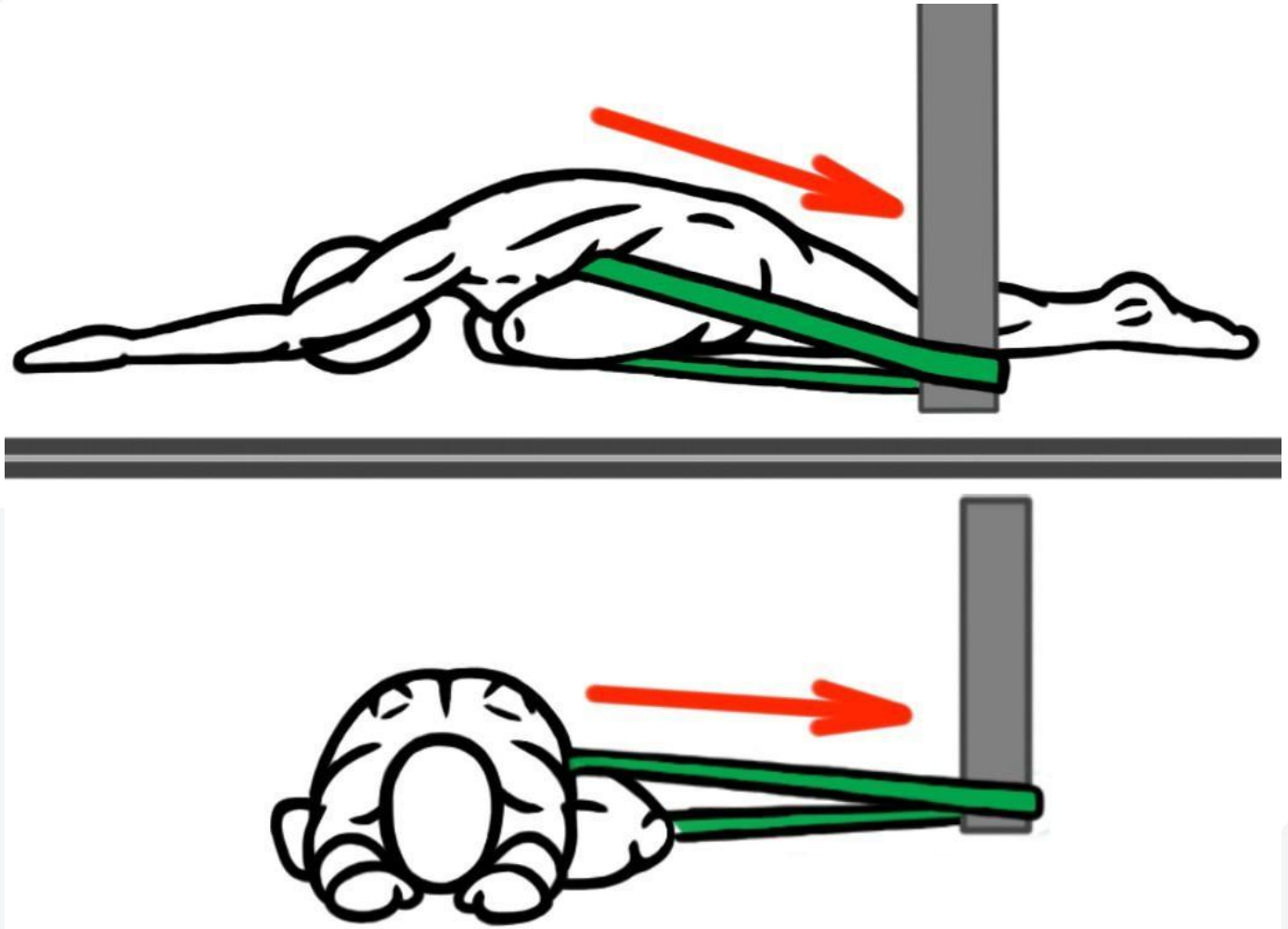


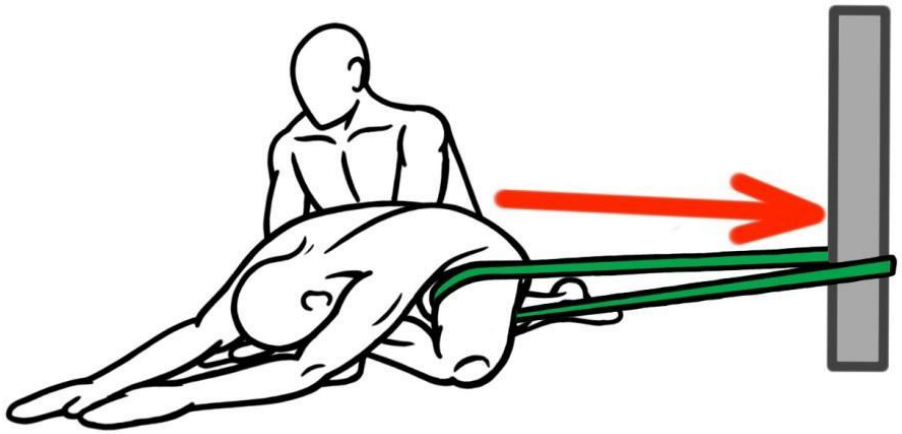


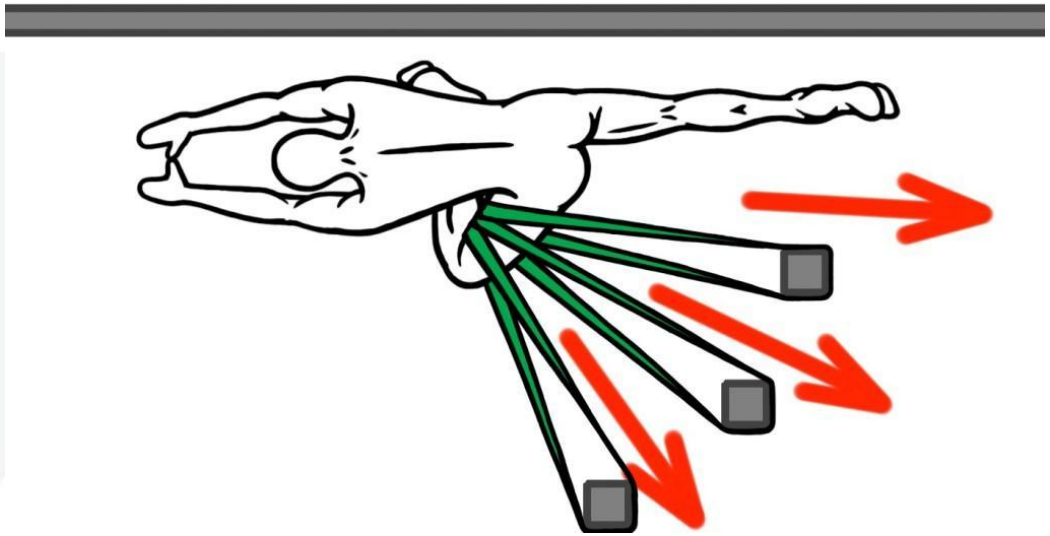


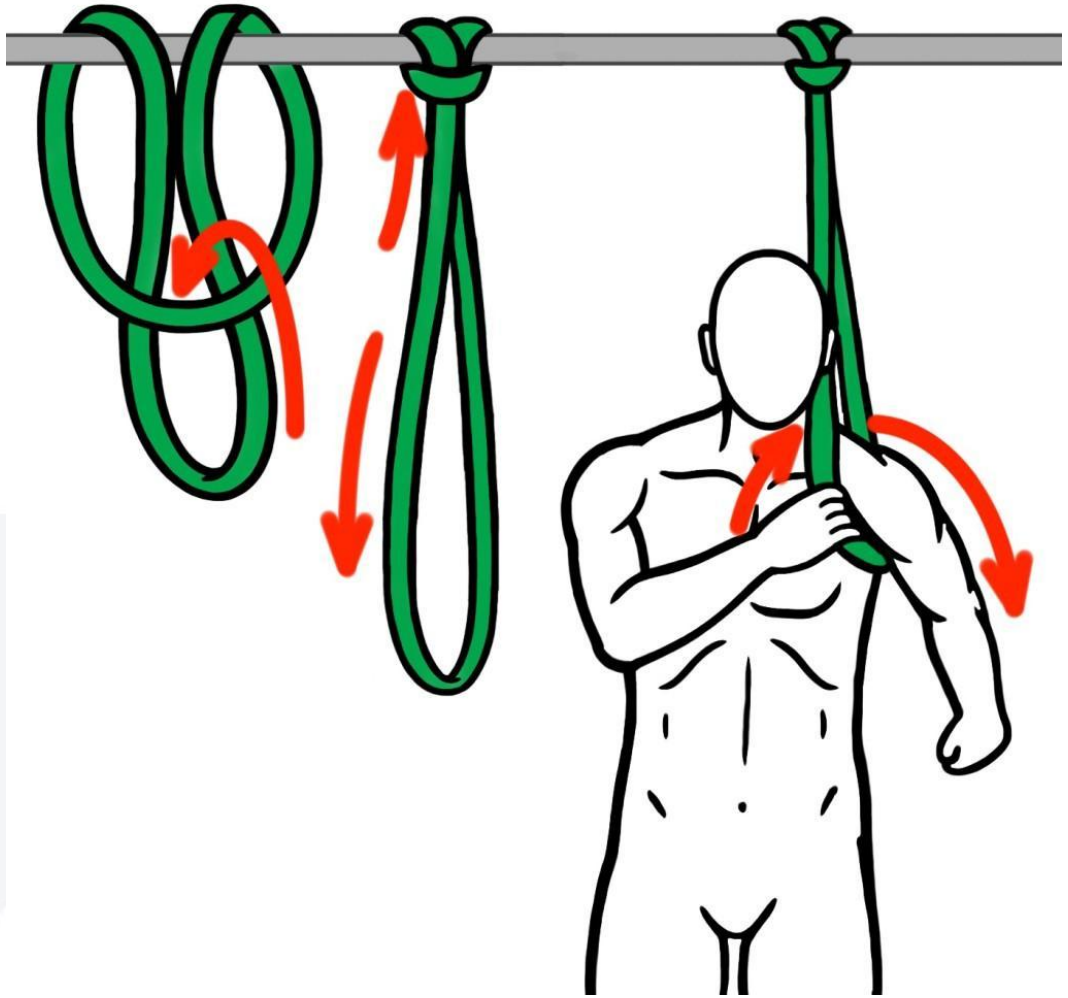


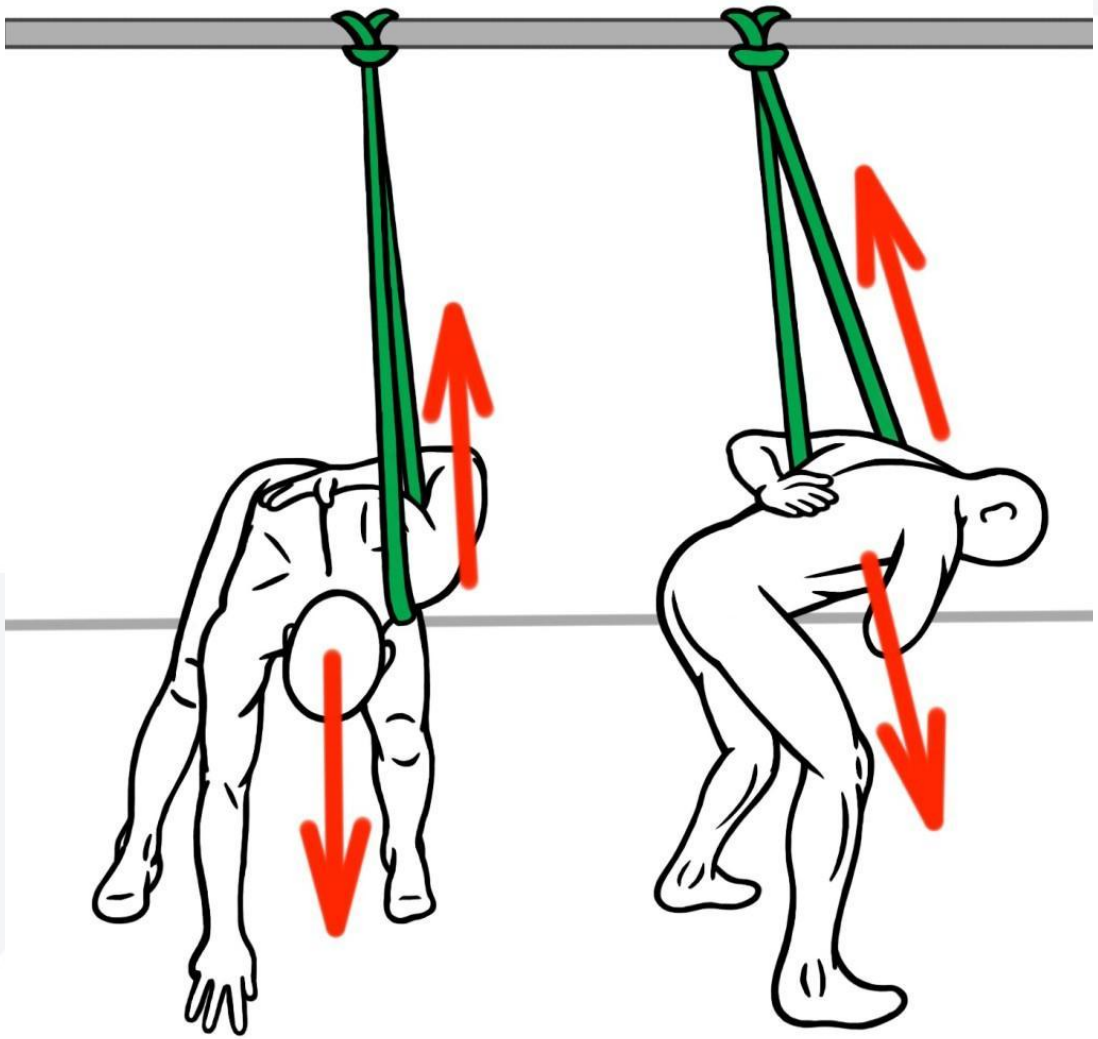


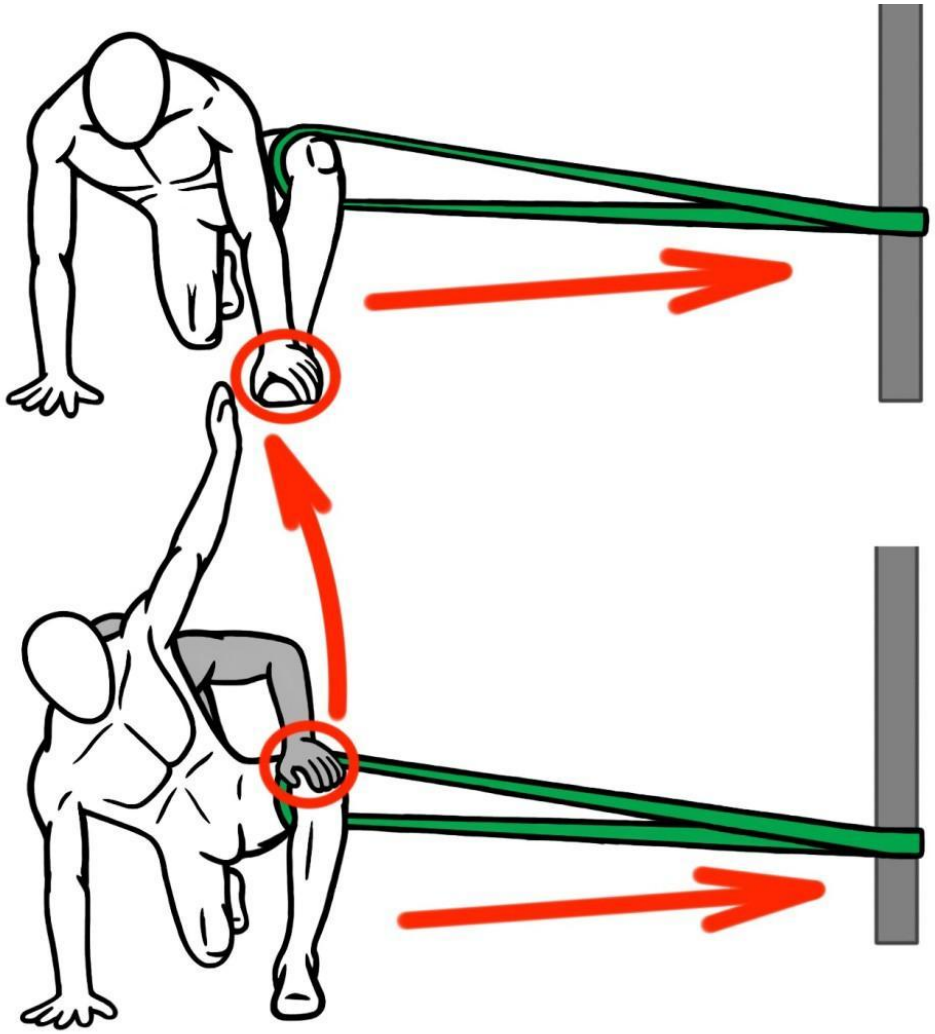












Taping

Taping

Today, there are more than 50 brands of kinesiology tape on the market, but the original product, Kinesio tape or Kinesio Tex Tape, was developed in the late 1970s by Dr. Kenzo Kase, a Japanese chiropractor who wanted a tape that provided support but didn’t limit movement the way traditional athletic tapes do.

Taping

- Kase created Kinesio tape with a proprietary blend of cotton and nylon. It’s designed to mimic the skin’s elasticity so you can use your full range of motion. The tape’s medical-grade adhesive is also water-resistant and strong enough to stay on for three to five days, even while you work out or take showers.
- When the tape is applied to your body, it recoils slightly, gently lifting your skin. It is believed that this helps to create a microscopic space between your skin and the tissues underneath it.

Taping

- Creates space in Joints
- Changes signals along pain pathways
- Improves circulation in blood and fluids

Taping

1. Pain Relief

Kinesiology taping is thought to relieve pain through different mechanisms. These could be grouped as either physical or neurological mechanisms.

Physically, the lifting action of the kinesiology tape may help to relieve pressure on pain receptors directly under the skin. This may provide both short and medium-term pain relief.

Chronic pain could be improved via sensory stimulation of some nerve fibres.

2. Swelling Reduction

By lifting this skin, kinesiology taping is thought to provide a negative pressure under the tape. This vacuum may allow the lymphatic drainage channels to drain swelling and other inflammatory cells away from the injured area.

3. Lymphoedema Reduction

Based on the same physical lifting principle, kinesiology taping may be effective in the reduction of lymphoedema.

Taping

4. Reduced Muscle Fatigue, Cramps and DOMS.

Exercise and repeated muscle contractions produce post-exercise byproducts such as lactic acid. Lactic acid can cause poor muscle performance, fatigue cramping and delayed onset muscle soreness (DOMS).

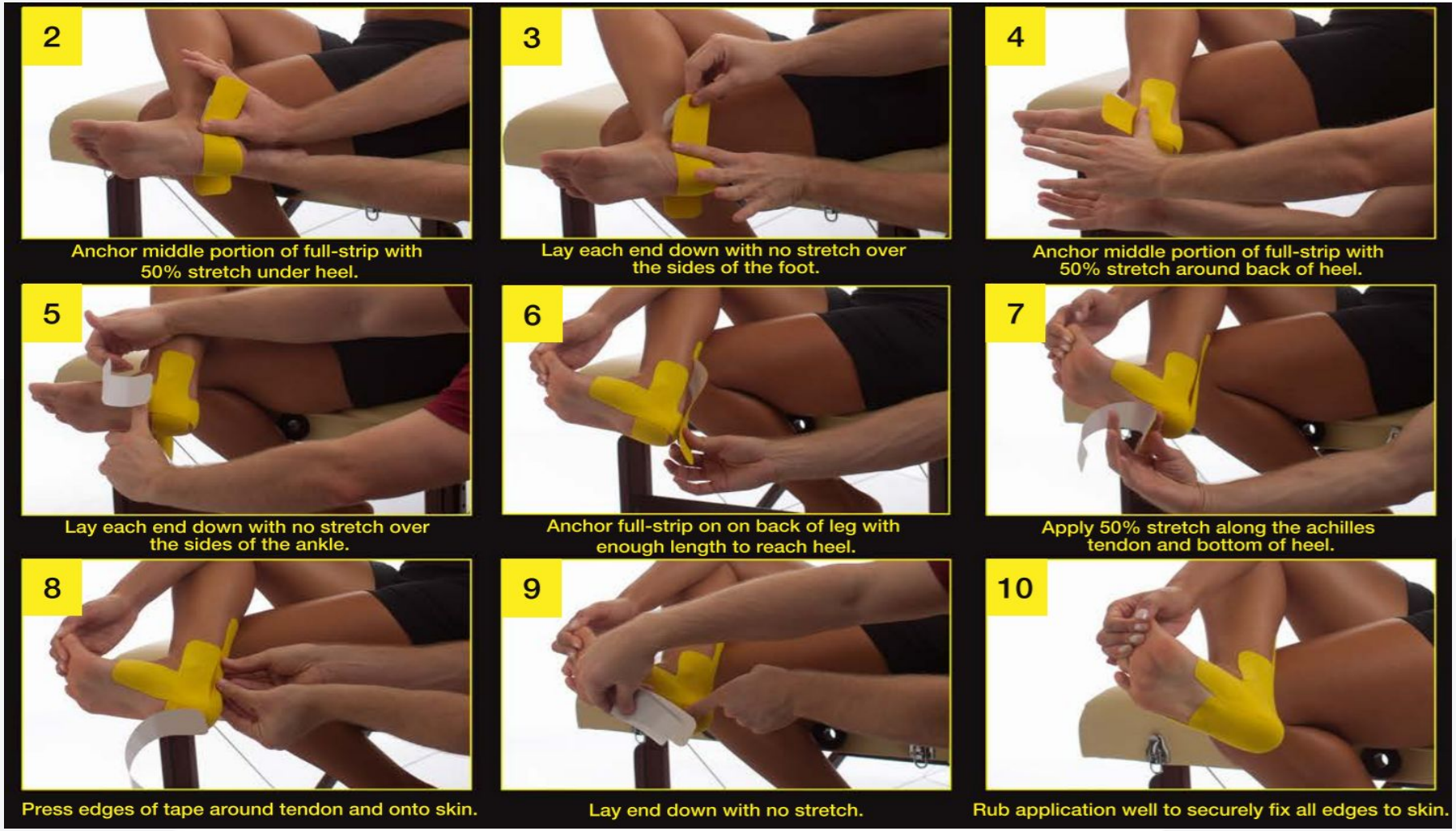
Kinesiology tape may help remove lactic acid and other exercise byproducts from the region, which could assist muscle performance, reduce fatigue, cramps and DOMS.

5. Assists Weak or Injured Muscles

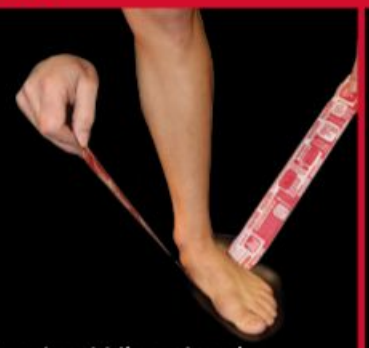
Kinesiology tape may provide both physical and neurological support for your dynamic structures such as muscles. This may assist everyday activities, high-level sport or potentially low tone children.

6. Quicker Return to Sport, Work and Play

By supporting weak or painful structures, kinesiology tape may allow injured athletes, workers and weekend warriors to return to sport, work or play quicker that without kinesiology tape's unique dynamic support.


2
Anchor middle portion of full-strip with 50% stretch under heel.
3
Lay each end down with no stretch over the sides of the foot.
4
Anchor middle portion of full-strip with 50% stretch around back of heel.
5
Lay each end down with no stretch over the sides of the ankle.
6
Anchor full-strip on on back of leg with enough length to reach heel.
7
Apply 50% stretch along the achilles tendon and bottom of heel.
8
Press edges of tape around tendon and onto skin.
9
Lay end down with no stretch.
10
Rub application well to securely fix all edges to skin.

ANKLE



1

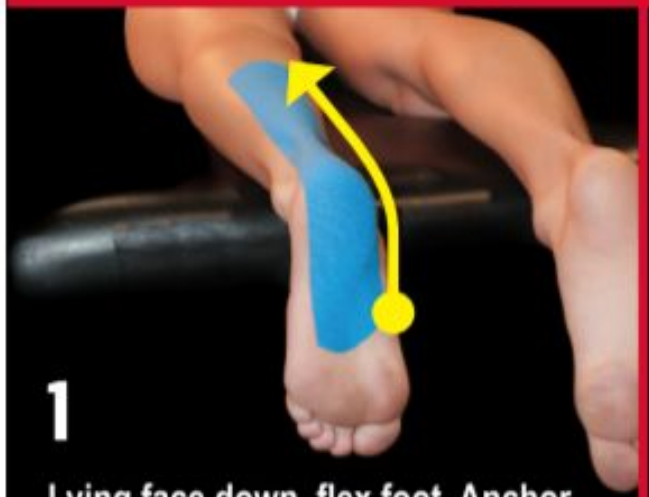
Tear tape in middle and peel release paper to expose tape. Step onto the tape and rub bottom of foot to activate adhesive.

2

Bring tape up and over in a criss-cross pattern, anchoring on either side of ankle with no stretch.

Optional: To create additional support, repeat the application, slightly overlapping the first application.

ACHILLES TENDON

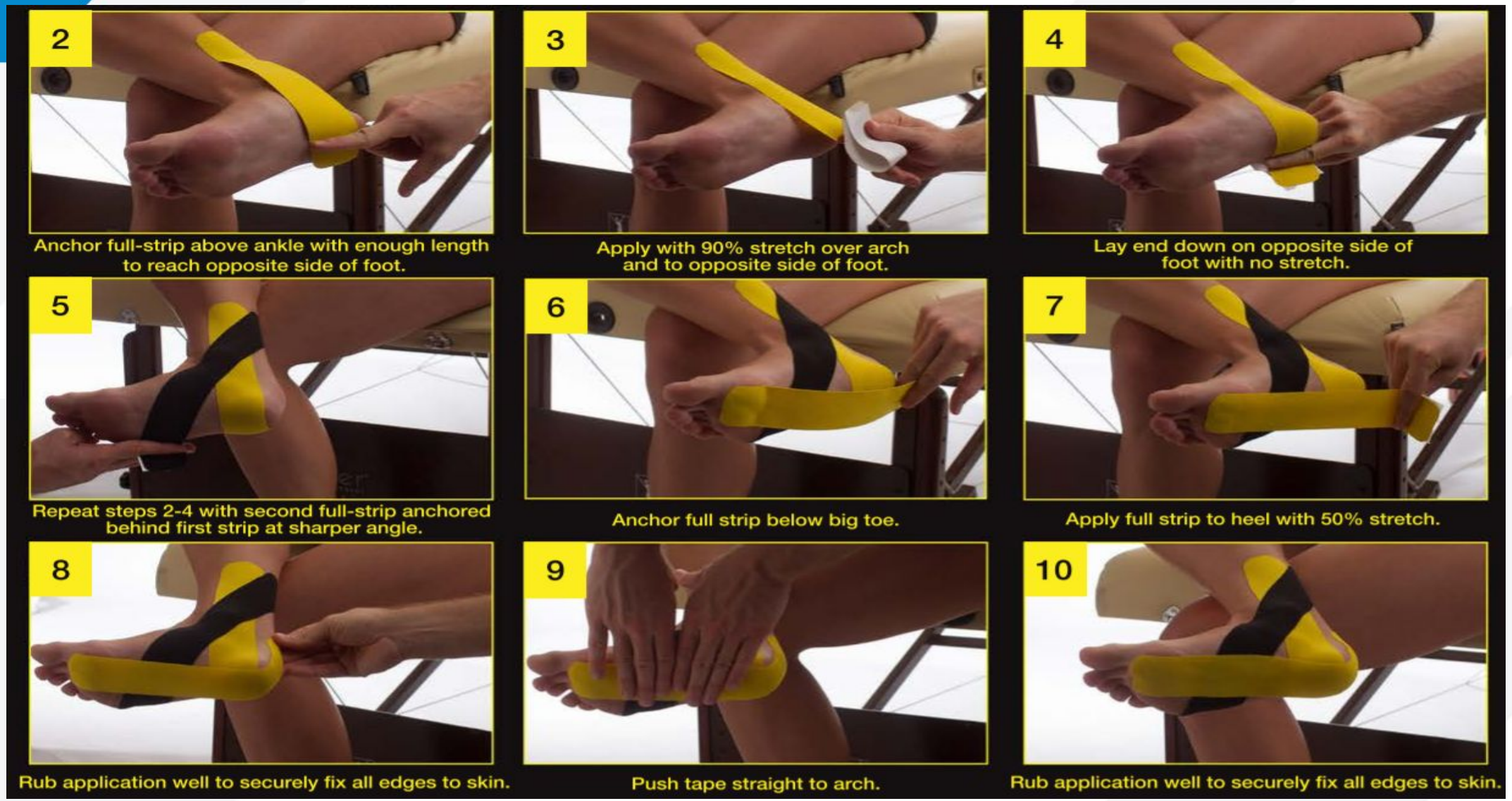


1

Lying face down, flex foot. Anchor tape at mid-arch. Run tape over Achilles tendon and finish at top of calf. Relax foot and rub down.

2

Optional, although recommended: apply piece of tape across the Achilles tendon with no stretch.


2
Anchor full-strip above ankle with enough length to reach opposite side of foot.
3
Apply with 90% stretch over arch and to opposite side of foot.
4
Lay end down on opposite side of foot with no stretch.
5
Repeat steps 2-4 with second full-strip anchored behind first strip at sharper angle.
6
Anchor full strip below big toe.
7
Apply full strip to heel with 50% stretch.
8
Rub application well to securely fix all edges to skin.
9
Push tape straight to arch.
10
Rub application well to securely fix all edges to skin.

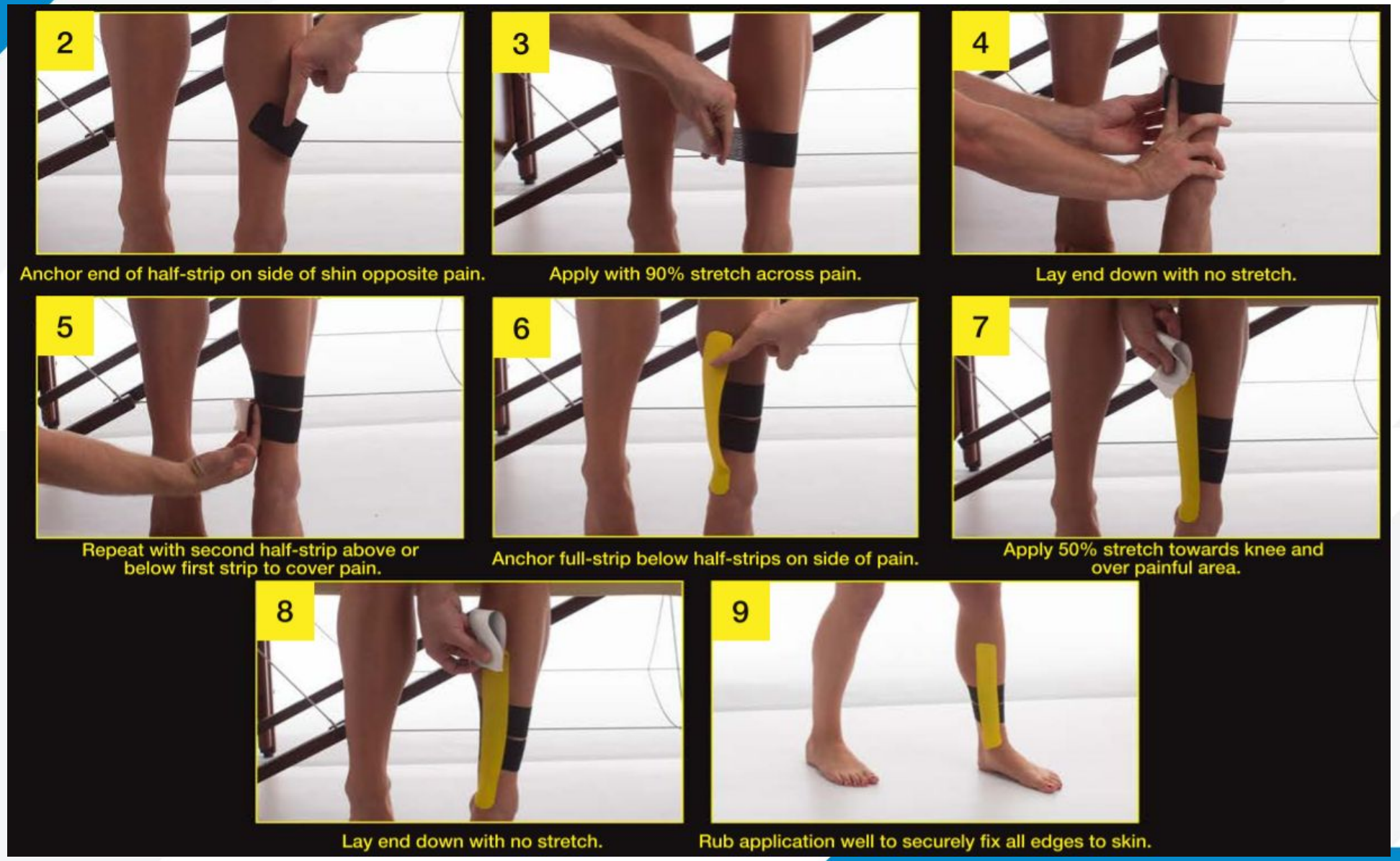
CALF

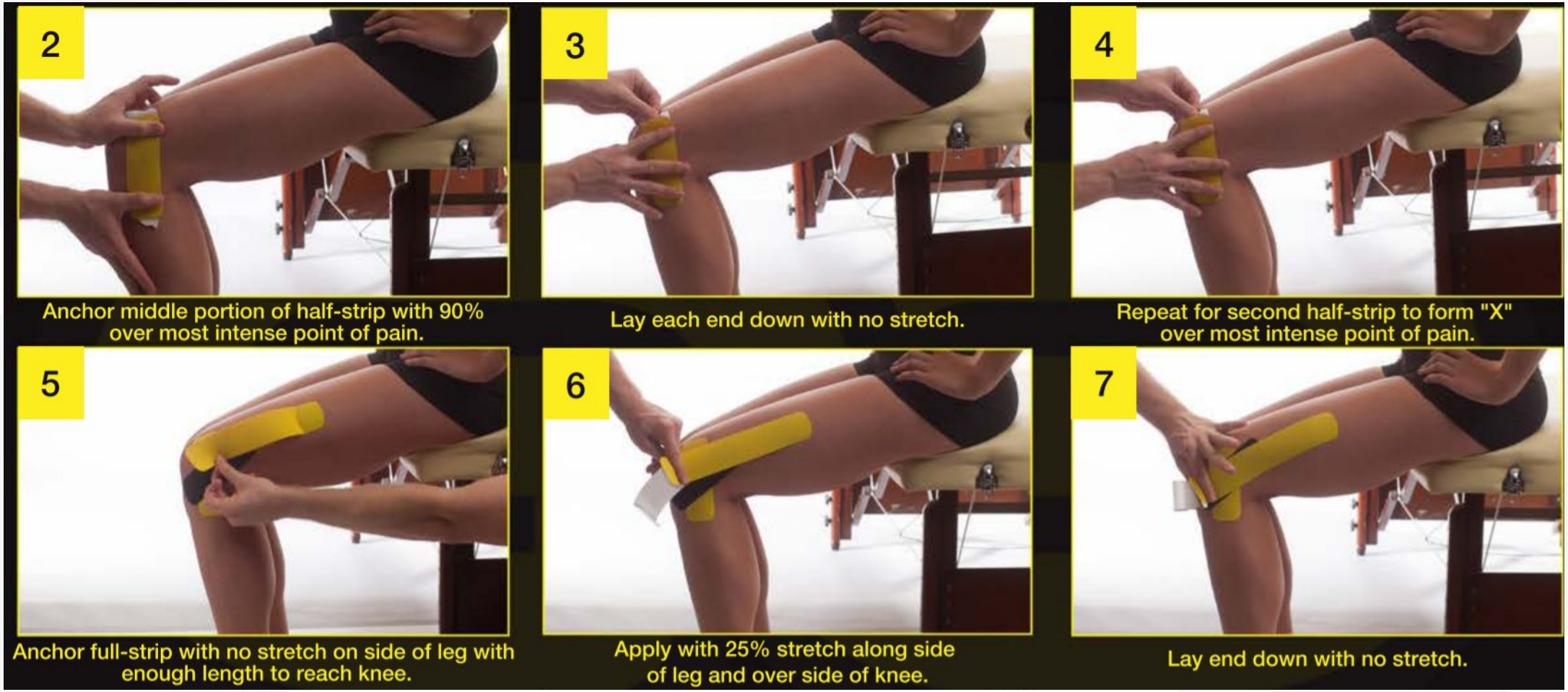
1

Place the calf in a stretched position. Apply tape from just above ankle to the top of the calf with no stretch.

2

Apply a support strip across the painful area with no stretch.


2
Anchor end of half-strip on side of shin opposite pain.
3
Apply with 90% stretch across pain.
4
Lay end down with no stretch.
5
Repeat with second half-strip above or below first strip to cover pain.
6
Anchor full-strip below half-strips on side of pain.
7
Apply 50% stretch towards knee and over painful area.
8
Lay end down with no stretch.
9
Rub application well to securely fix all edges to skin.


2
Anchor middle portion of half-strip with 90% over most intense point of pain.
3
Lay each end down with no stretch.
4
Repeat for second half-strip to form "X" over most intense point of pain.
5
Anchor full-strip with no stretch on side of leg with enough length to reach knee.
6
Apply with 25% stretch along side of leg and over side of knee.
7
Lay end down with no stretch.

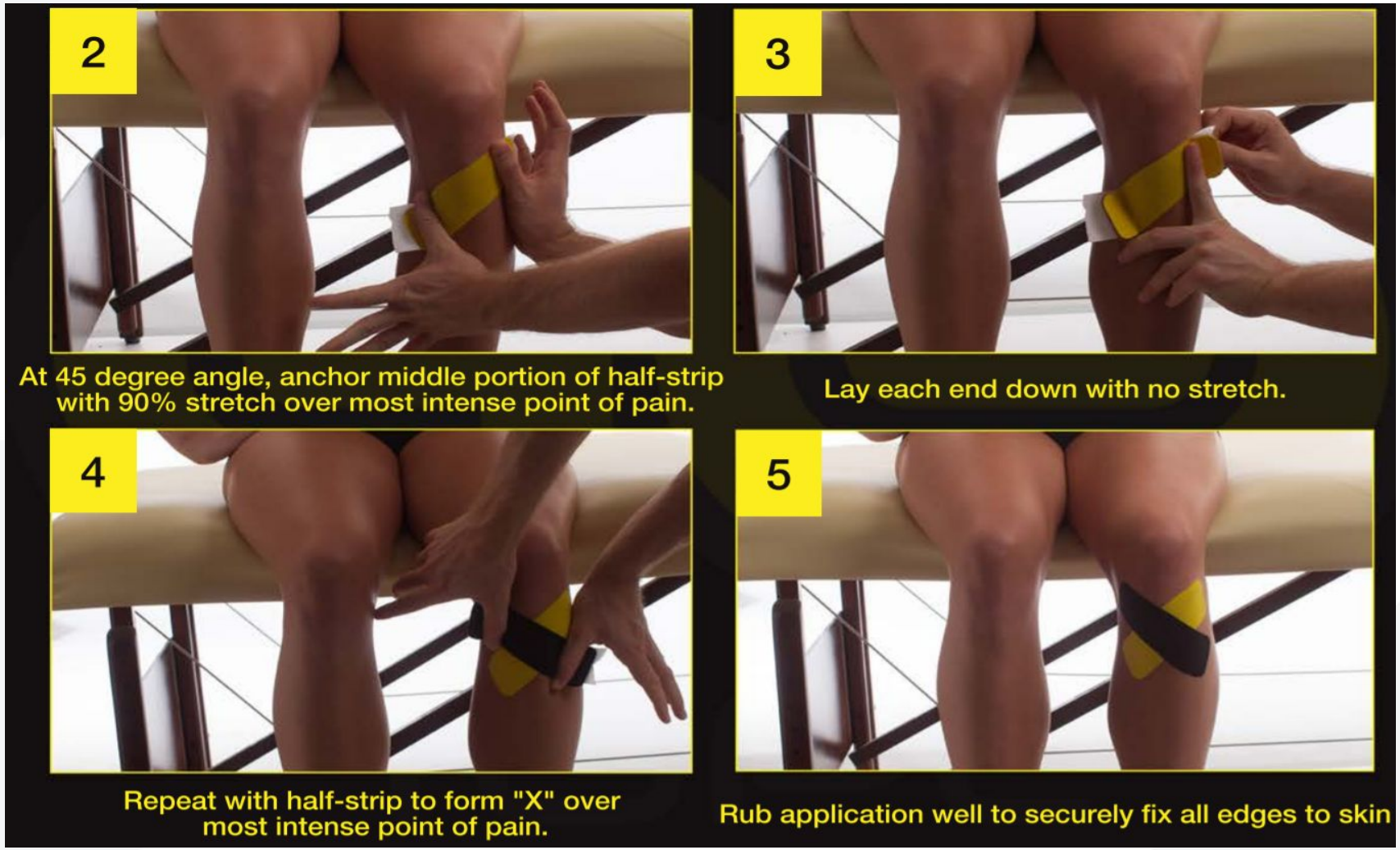
IT BAND

1

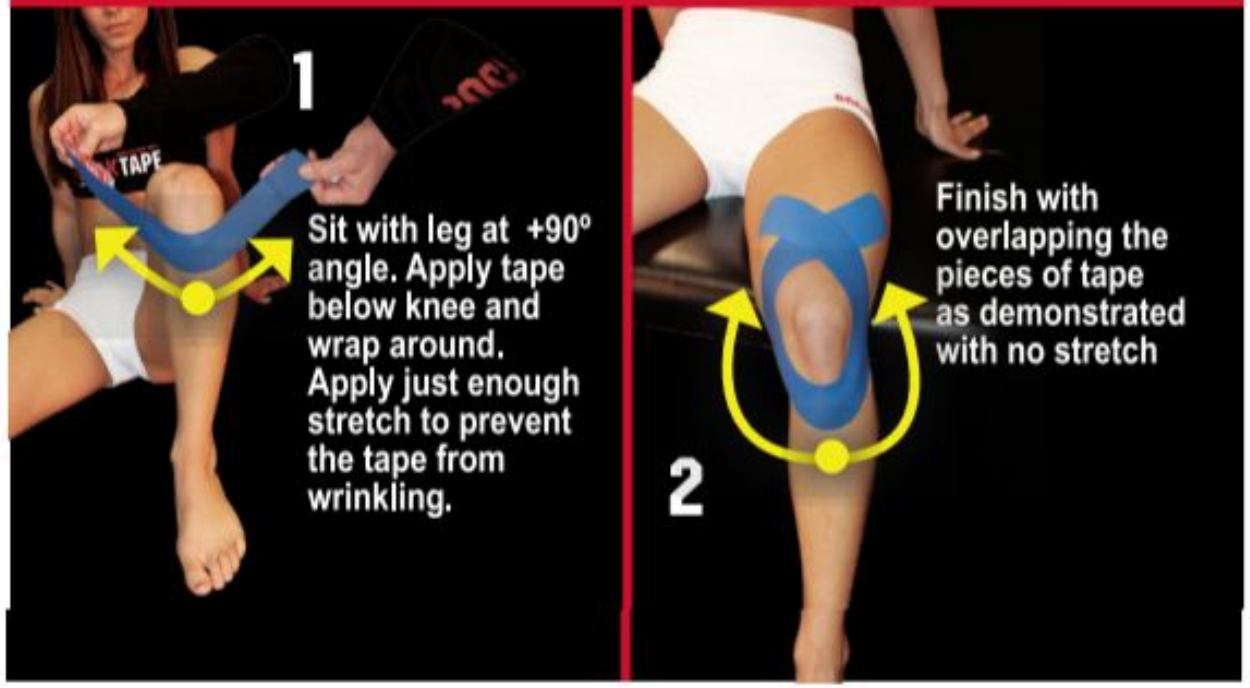
Lying on side, cross top leg over and touch knee to table or ground. Anchor tape on the side of leg on upper thigh and run to knee with no stretch.

2

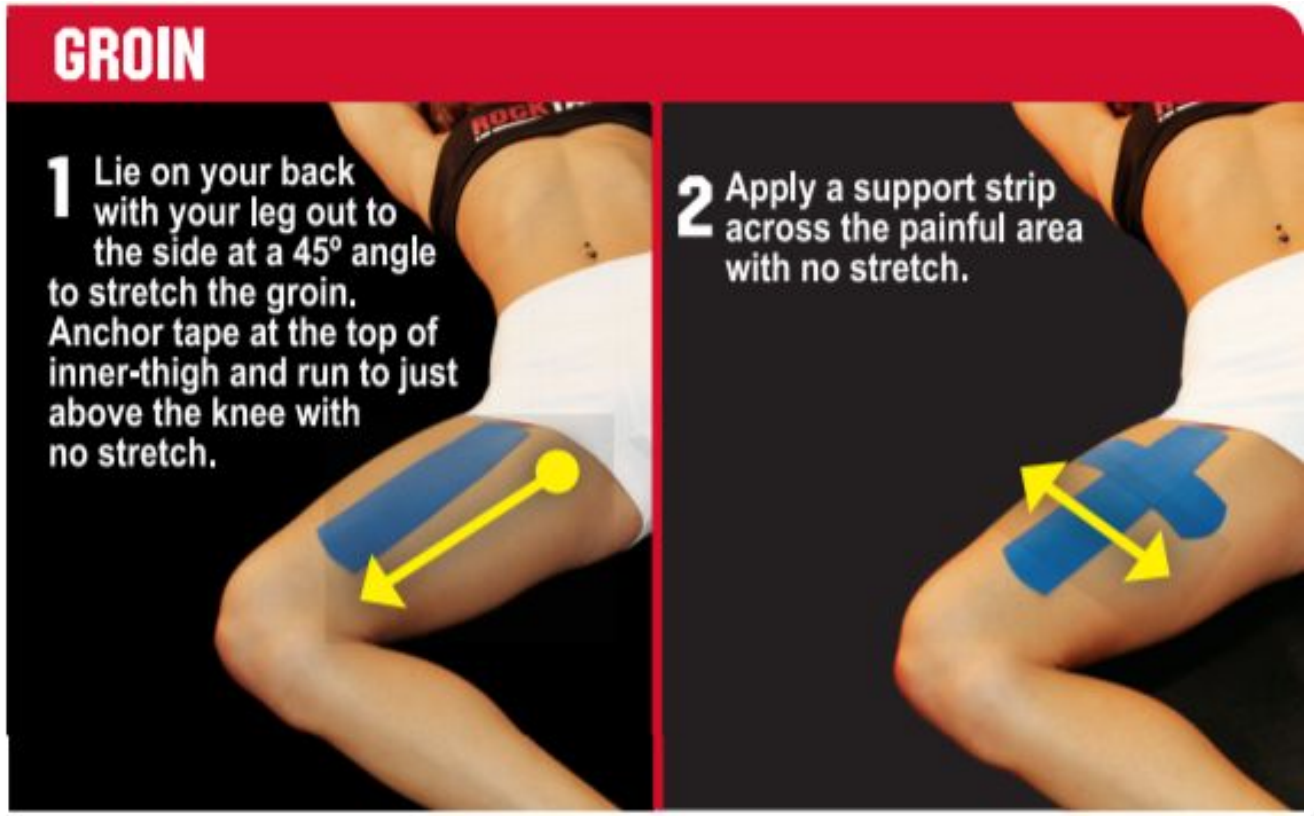
Apply a support strip across the painful area with no stretch.

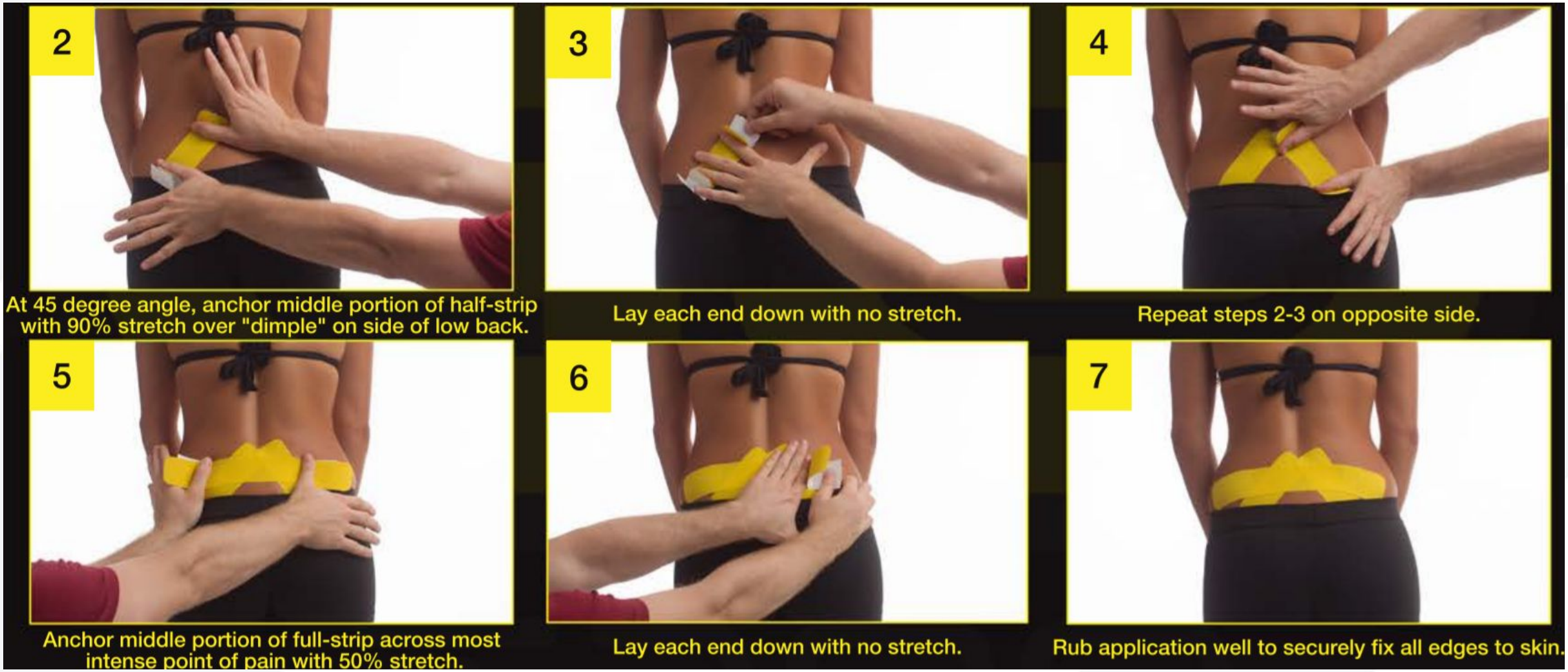

2
At 45 degree angle, anchor middle portion of half-strip with 90% stretch over most intense point of pain.
3
Lay each end down with no stretch.
4
Repeat with half-strip to form "X" over most intense point of pain.
5
Rub application well to securely fix all edges to skin

KNEE

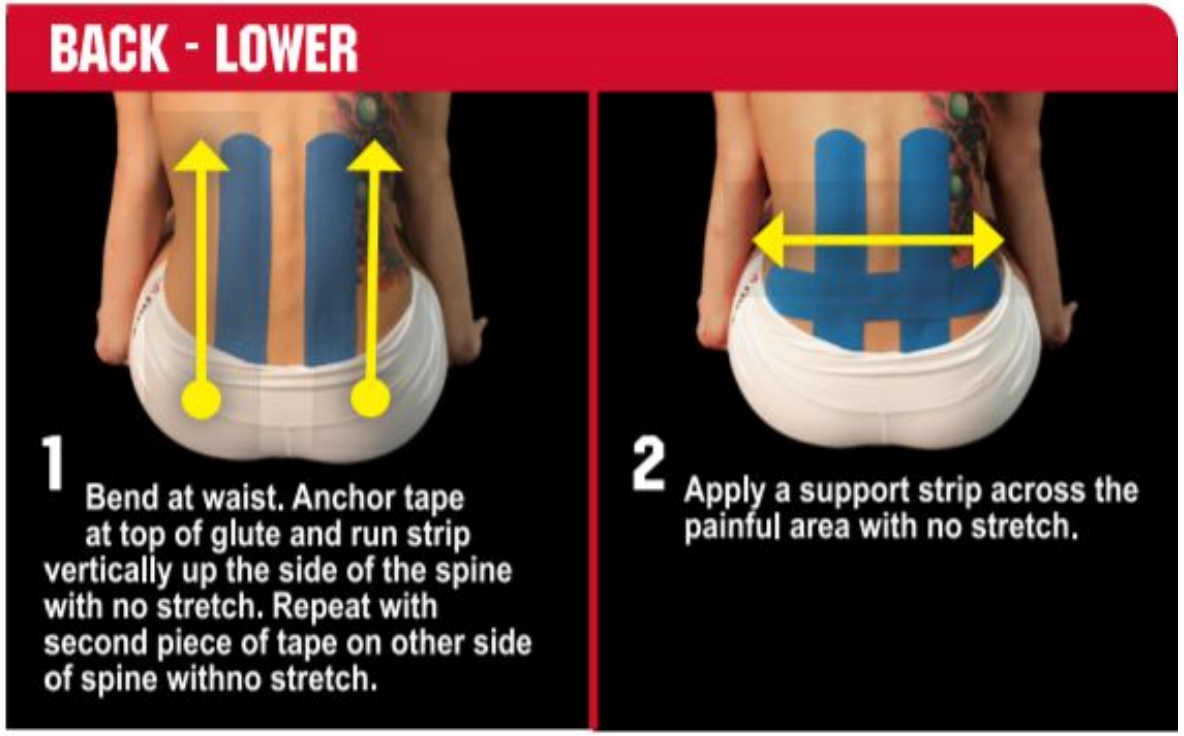

1
Sit with leg at +90° angle. Apply tape below knee and wrap around. Apply just enough stretch to prevent the tape from wrinkling.
2
Finish with overlapping the pieces of tape as demonstrated with no stretch

GROIN


1 Lie on your back with your leg out to the side at a 45° angle to stretch the groin. Anchor tape at the top of inner-thigh and run to just above the knee with no stretch.
2 Apply a support strip across the painful area with no stretch.

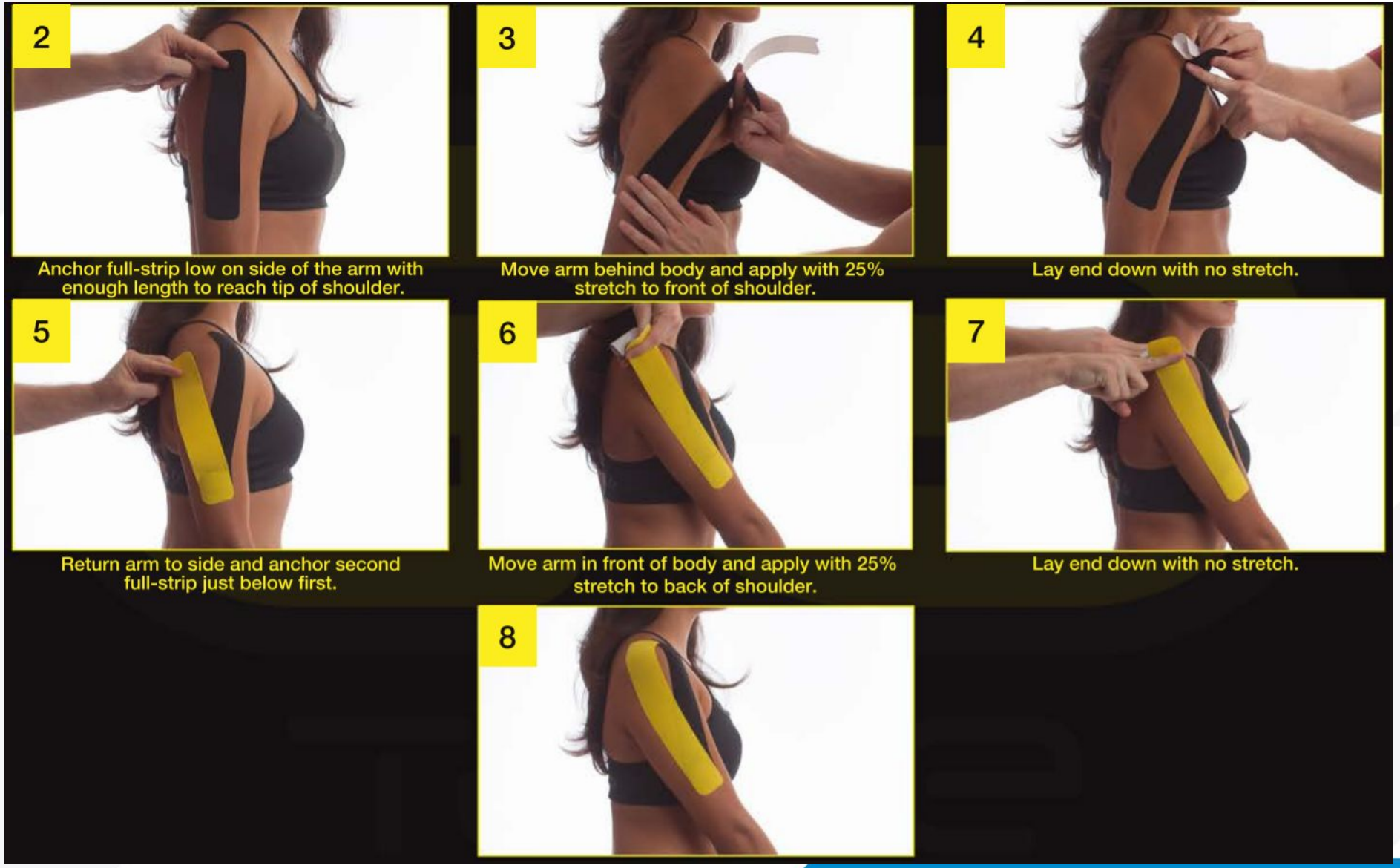

2
At 45 degree angle, anchor middle portion of half-strip with 90% stretch over "dimple" on side of low back.
3
Lay each end down with no stretch.
4
Repeat steps 2-3 on opposite side.
5
Anchor middle portion of full-strip across most intense point of pain with 50% stretch.
6
Lay each end down with no stretch.
7
Rub application well to securely fix all edges to skin.

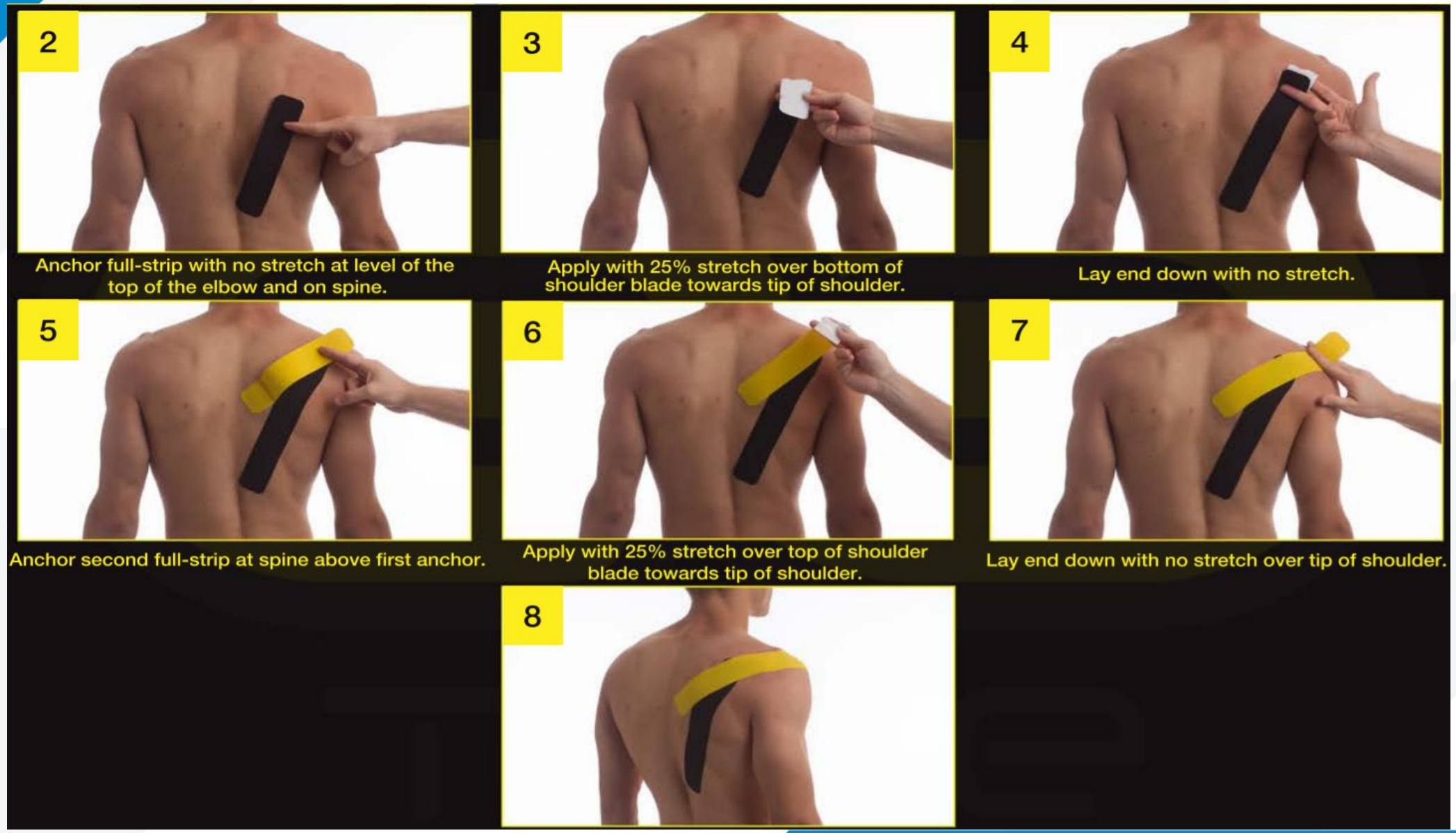
BACK - LOWER



1 Bend at waist. Anchor tape at top of glute and run strip vertically up the side of the spine with no stretch. Repeat with second piece of tape on other side of spine withno stretch.

2 Apply a support strip across the painful area with no stretch.


2
Anchor full-strip low on side of the arm with enough length to reach tip of shoulder.
3
Move arm behind body and apply with 25% stretch to front of shoulder.
4
Lay end down with no stretch.
5
Return arm to side and anchor second full-strip just below first.
6
Move arm in front of body and apply with 25% stretch to back of shoulder.
7
Lay end down with no stretch.
8


2
Anchor full-strip with no stretch at level of the top of the elbow and on spine.
3
Apply with 25% stretch over bottom of shoulder blade towards tip of shoulder.
4
Lay end down with no stretch.
5
Anchor second full-strip at spine above first anchor.
6
Apply with 25% stretch over top of shoulder blade towards tip of shoulder.
7
Lay end down with no stretch over tip of shoulder.
8

NECK

1

Stretch neck by lowering chin onto chest. Anchor tape at mid-back on the spine and run strip to top of the shoulder with no stretch. Apply second strip from spine to other shoulder with no stretch.

2

Apply a support strip across painful area with no stretch. Make sure to finish on the tops of the shoulders.

RIB AREA


1 With arm over head, stretch body by leaning away from affected area. Anchor tape above the rib area and apply diagonally with no stretch to below the rib area.
2 Apply a second strip running from the top of the rib area diagonally in the opposite direction.

Rehab

- Activation
- Initiation
- Recruitment

Rehab

- Universal Athletic Stance

- MAXIMUM ACTIVATION OF QUADRICEPS AND HAMSTRINGS AT 30 DEGREES

Highest Exercise of Achievement

DEAD LIFT

Rehab

UPPER

Activation Initiation Recruitment

ARM

SHOULDER

NECK

Cervical Rehab

- Suboccipitals
- Deep Neck Flexors

- Tri-Flex – Necksys
- Hill Neck Restorer

Wobble Board

Shoulder Rehab

Cervical stability imperative

Activation Initiation Recruitment

Thumbs Up

Bilateral External Rotation with band

Serratus Push

Straight Arm Arch

Lower Back Rehab

Activation Initiation Recruitment

HIP

PELVIS

LOWER BACK

Lower Back Rehab

- Cat/Camel
- Pelvic Tilts
- Running Man
- Opposite Arm/Leg
- Superman

Exercise Ball

Lower Back Rehab

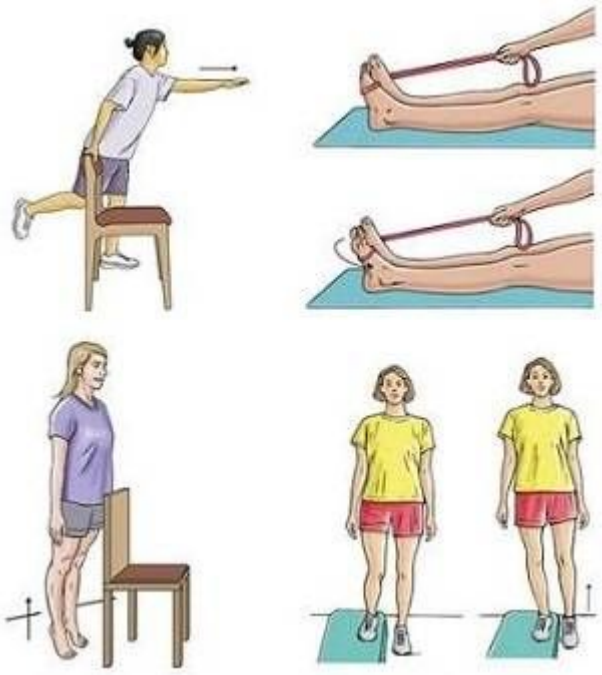
Activation Initiation Recruitment

- Ball Extension
  - Straighten Legs
  - Tippy Toe
  - Squeeze Butt
  - Extend

Lower Back Rehab

- Advanced Exercises
  - Bridge
  - Plank
  - Squat
  - Dead lift

Ankle/Knee



Stability

Knee

- Cross Zindler Technique
  - Plantaris
  - Popliteus

The Stick

Proper Roller

Mastering Drops

LEG/KNEE/FOOT/ANKLE

LEG/KNEE/FOOT/ANKLE

- CALCANEUS

LEG/KNEE/FOOT/ANKLE

- TALUS

LEG/KNEE/FOOT/ANKLE

- CUBOID
  - EVERSION
  - FLEXION INVERSION

LEG/KNEE/FOOT/ANKLE

- NAVICULAR

LEG/KNEE/FOOT/ANKLE

- DROPPED METATARSAL HEADS

LEG/KNEE/FOOT/ANKLE

- CROSS ZINDLER
  - POPLITEUS
  - PLANTARIS

LEG/KNEE/FOOT/ANKLE

- FIBULAR HEAD
  - FLEXION
  - DROPS

LEG/KNEE/FOOT/ANKLE

- TIBIA

PELVIS

- “SPONDY”
  - STRAIN COUNTERSTRAIN
  - SET IT

PELVIS

- LET’S DO WHAT WE DO AND ADJUST

PREGNANCY

- SUPINE
  - TFL/PSOAS RELEASE
  - ROUND LIGAMENT
  - HOLE IN ONE VS ANTERIOR ASIS

- PRONE
  - SACROTUBEROUS LIGAMENT

PREGNANCY

- WEBSTER TECHNIQUE

SHOULDER GIRDLE

SHOULDER GIRDLE

- STANDING
  - ANTERIOR RIB
  - CLAVICLE
  - SCAPULAR RESET

SHOULDER GIRDLE

- PRONE
  - RIB – LOWER/UPPER
  - TILTED RIBCAGE
  - SCAPULAR RESET

SHOULDER GIRDLE

- SUPINE
  - SC/Ant 1st rib
  - AC
  - COSTOCHONDRAL

SHOULDER GIRDLE

- PEC MINOR/SUBCLAVIUS/CORACOBRACHIALIS/BICEP TENDON
  - SUPINE/SEATED

LOWER ARM

LOWER ARM

- RADIAL HEAD
  - SUP/LAT
  - INF/MED
    - PRONATOR TERES RELEASE

LOWER ARM

- ULNA

LOWER ARM

- SCAPHOID
  - SUP ⇨ INF

LOWER ARM

- Lunate
  - I ⇨ S
- Capitate
  - I ⇨ S

LOWER ARM

- TRAPEZIUM/TRAPEZOID

LOWER ARM

- TRIQUETRUM/HAMATE/PISIFORM I-S - LATERAL

OCCIPUT, ATLAS, CERVICALS, TMJ

OCCIPUT, ATLAS, CERVICALS, TMJ

- PULL

OCCIPUT, ATLAS, CERVICALS, TMJ

- OCCIPUT

OCCIPUT, ATLAS, CERVICALS, TMJ

- ATLAS

OCCIPUT, ATLAS, CERVICALS, TMJ

- C3

OCCIPUT, ATLAS, CERVICALS, TMJ

- LET’S DO WHAT WE DO AND ADJUST