

WELCOME TO



PEAK VITALITY ACADEMY

Performance Education in Athletics and Kinesiology

FOUNDATION OF HUMAN MOVEMENT 1

Yaw A. Owusu Jr.

Co- founder

B.S. Exercise Science, NASM CPT, CES

Precision Nutrition Certified

PVA MISSION

BUILDING AN ONLINE COACHING PLATFORM THAT PROVIDES EDUCATIONAL STRATEGIES, COLLABORATIVE DEVELOPMENT, AND PROFESSIONAL INSIGHT TO OPTIMIZE CLIENTS PATH TO PEAK VITALITY.

FOUNDATIONS OF HUMAN MOVEMENT OBJECTIVES

- Restorative Human Movement Method – Learn the foundations of RHM
- Functional Anatomy & Kinesiology – Learn the foundations of human movement
- RHM Program Management Simulation – Develop, Design and Deliver

FOUNDATIONS OF HUMAN MOVEMENT DELIVERABLES

- RHM Assessment Template
- RHM Program Template Program solutions for 21 common imbalances
- 4 Contact Hours Workshop Certificate of Completion

INTRODUCTION TO EPIGENETICS

- The study of heritable changes in gene expression (active vs. inactive genes) that does not involve changes to the underlying DNA sequence — but instead a change in the phenotype — without a change in genotype — which in turn affects how cells read the genes.
- Epigenetic change is a regular and natural occurrence but can also be influenced by several factors including but not limited to:
 - Nutrition
 - Environment
 - Lifestyle
 - Mindset
 - Disease State
 - Exercise

Vitality Training System

Vitality Training System is a ground-breaking coach, consulting technology concept, a vitality code to assess, create, and apply individualized programs based on 5 pillars of wellness making this the secret to obtaining your body's optimal potential for vitality. Before reaching your goals in these 5 areas you must have a clear idea of how you will approach that task

- Mindset
- Nutrition
- Sleep
- Recovery
- Exercise



Vitality Training System

Recovery: Conscious

- This substrate addresses mainly physical recovery such as flexibility to increased circulation, increased blood flow, decrease inflammation and injury prevention through true human movement patterns.

Substrates of Recovery for sustainable movement pattern capability:

- 1. Assessment – needs analysis of movement
- 2. Program development – based of needs analysis of movement
- 3. Program management – program execution through adaptable daily protocols



1. WHAT IS RESTORATIVE HUMAN MOVEMENT?

- **Corrective exercise** is a term thrown around a lot in the fitness industry as a form of training that only happens when injured or recovering from surgery. The truth is every exercise, or movement should always be corrected for appropriate form and proper mechanics, so by default all exercise is corrective exercise. Corrective exercise should start being labeled as restorative human movement.
- **Restoring Human Movement** is the act of discovering and addressing the source of any imbalances or physical limitations in the body, then applying a program that will improve stability, mobility and functionality in said area. Fitness professionals should always focus on restoring human movement because establishing a solid foundation of physical function is imperative to starting a workout plan. Without first correcting dysfunctions, full range of motion can be limited, and proper muscle activation will not be present to perform exercises correctly.

2. WHO NEEDS TO RESTORE HUMAN MOVEMENT?

As humans we have 7 primal movement patterns, we need for true human function.

- **Squat**- Patterns
- **Hip Hinge**- Patterns
- **Lunge**- Patterns in 3 plane of movement
- **Upper Body Pull**- Patterns
- **Upper Body Push**- Patterns
- **Trunk Rotation**- Patterns
- **Gait**- Pattern through (Walking, Running, Sprinting)

3. WHY DO WE PROGRAM FOR RESTORATIVE HUMAN MOVEMENT?

- **1. Preparation Phase:** Questionnaire
- **2. Consultation Phase:** Review Questionnaire
- **3. Assessment Phase:** Assessment of Qualities & Authenticity
- **4. Programming Phase:** Develop Recovering Programming
- **5. Coaching Phase:** Programming Management

4. WHY DO WE NEED TO ASSESS MOVEMENT PATTERNS?

We need a snapshot to see and record the types of dysfunctions that exist, why, and where an individual's current program phase placement would be.

The scientific models applied within our “why” (e.g., Kinesiology) will be thoroughly discussed through the RHM Method.

5. HOW DO WE ASSESS MOVEMENT PATTERNS?

- **R.H.M. screen** - is a movement pattern test that takes an individual through 7 primal movement patterns and assess dysfunction through a lack of stability or lack of mobility in 7 distinct pillars of the body. This will provide us with an accurate depiction on what phase of training, nutrition, and restorative movement each person will start in.
- This 7-point movement screen offers a comprehensive view of an individual's functional movement capabilities, covering lower body, upper body, core, and full-body coordination. It can be used by fitness professionals, coaches, and healthcare providers to develop targeted training programs, prevent injuries, and improve overall movement quality.

Within these 7 Primal Movement Patterns are underlying factors for movement success that I have termed the “**7 Pillars of RHM.**” The 7 Pillars of RHM looks at movement through a joint-by-joint approach from the feet to the head.

- ◉ 1st pillar foot stability
- ◉ 2nd pillar ankle mobility
- ◉ 3rd pillar knee stability
- ◉ 4th pillar hip mobility
- ◉ 5th pillar trunk stability
- ◉ 6th pillar shoulder mobility
- ◉ 7th pillar neck stability

RHM METHOD

As movement specialists, we understand that the human body is an interconnected system designed for efficient, pain-free movement. However, modern lifestyles often lead to dysfunctional movement patterns, postural imbalances, and chronic pain. Restorative human movement is our approach to addressing these issues and optimizing how the body functions.

- We often draw from various modalities like Functional Range Conditioning (FRC), Dynamic Neuromuscular Stabilization (DNS), Functional Movement Screen (FMS) approach, and others. The goal is to create a tailored program that addresses everyone's specific needs and goals.
- As movement specialists, we see restorative human movement as a powerful tool for not just rehabilitation, but for enhancing overall quality of life and physical performance. It's about reconnecting people with their bodies' innate capacity for fluid, efficient, and pain-free movement.

WHAT IS THE RHM METHOD?

Seven Primal Movement Patterns - **Goal**

(7 pillars of RHM) RHM Screen - **Strategy**

Five Step RHM Process - **Tactics**

Seven Phases of RHM – **Program**

Five Step Program Management Process - **System**

RHM Screen (7 Pillars of RHM)

- R.H.M. screen - is a movement pattern test that takes an individual through 7 primal movement patterns and assess dysfunction through a lack of stability or lack of mobility in 7 distinct pillars of the body. This will provide us with an accurate depiction on what phase of training, nutrition, and restorative movement each person will start in.
- This 7-point movement screen offers a comprehensive view of an individual's functional movement capabilities, covering lower body, upper body, core, and full-body coordination. It can be used by fitness professionals, coaches, and healthcare providers to develop targeted training programs, prevent injuries, and improve overall movement quality.
- Within these 7 Primal Movement Patterns are underlying factors for movement success that I have termed the “**7 Pillars of RHM.**” The 7 Pillars of RHM looks at movement through a joint-by-joint approach from the feet to the head.

Restorative Human Movement

7 PILLARS OF THE RHM PROGRAM

- ◉ 1st pillar **foot** stability
- ◉ 2nd pillar **ankle** mobility
- ◉ 3rd pillar **knee** stability
- ◉ 4th pillar **hip** mobility
- ◉ 5th pillar **trunk** stability
- ◉ 6th pillar **shoulder** mobility
- ◉ 7th pillar **neck** stability

7 PMP (RHM SCREENING)

- ◉ Squat (Lower body)
- ◉ Hip Hinge (Lower body)
- ◉ Lunge (3 planes of Motion)
- ◉ Pull (Upper body)
- ◉ Push (Upper body)
- ◉ Rotation (Upper and Lower body)
- ◉ Gait Pattern (Crawl, Climb, Walk)

5 STEP PROCESS OF RHM

- Assess – Specific Pillar
- Inhabitation-Specific Pillar
- Activation - Specific Pillar
- Strength – Specific Pillar
- Integration - Specific Pillar

Restorative Human Movement

PVS 5 PHASE PROGRAM MANAGEMENT PROGRAM

- 1. Preparation Phase: Questionnaire
- 2. Consultation Phase: Review Questionnaire
- 3. Assessment Phase: Assessment of Qualities & Authenticity
- 4. Programming Phase: Develop Programming
- 5. Training Phase: Programming Execution & Management

7 PHASES OF THE RHM PROGRAM

- Phase 1:** Shoulder Complex RHM
- Phase 2:** Hip Complex RHM
- Phase 3:** Lower Leg Complex RHM
- Phase 4:** Upper body Active preparation
- Phase 5:** Lower body Active preparation
- Phase 6:** Full body Static Stretching
- Phase 7:** Full body Dynamic movement

PVS: 5 Phases Program Management Process

- **1. Preparation Phase:** Pillar Specific Questionnaire
- **2. Consultation Phase:** Review Questionnaire
- **3. Assessment Phase:** Assessment of Qualities & Authenticity
- **4. Programming Phase:** Develop Recovering Programming
- **5. Coaching Phase:** Programming Management

Functional Anatomy & Kinesiology

Pillar 1: Feet

Pillar 2: Ankle Complex

- Muscle Pathology
- RHM 5 step process
- Goal oriented program

Client Management Simulation



Lower Leg Complex Mobility

1st Pillar Active Foot Stability – actively stabilize the entire foot through the 7 PMP

2nd Pillar Active Ankle Mobility – actively stabilize the entire foot through the 7 PMP

Function of the Foot & Ankle

➔ Plantar Flexion

- Gastrocnemius
- Soleus
- Posterior Tibialis
- Peroneus Longus

➔ Inversion

- Posterior Tibialis
- Anterior Tibialis

➔ Dorsi Flexion

- Anterior Tibialis

➔ Eversion

- Peroneus Longus
- Peroneus Brevis

RHM

➔ Common Ailments & Imbalances

- Foot – Instability
- Ankle – Immobility
- MTSS
- Stress Fracture
- Flat Feet
- High Arches
- Heel Spurs

➔ ***5 Step Process***

- Assessment
- Inhibit
- Activate
- Strengthen
- Integrate

Common Ailments & Imbalances

- Medial tibial stress syndrome, tibial [periostitis](#) or shin splints is a common injury that affects athletes who engage in running sports or basic activities such as cross country, football, or hiking. This condition is characterized by pain in the lower part of the leg between the knee and the ankle. MTSS injuries are caused by repeated trauma to the connective muscle tissue surrounding the [tibia](#). Ignoring this injury may result in a more serious condition such as a [stress fracture](#) of the bones.
 - ◉ Excessive [pronation](#) at [subtalar joint](#)
 - ◉ Excessively tight calf muscles (which can cause excessive pronation)
 - ◉ Engaging the medial shin muscle in excessive amounts of eccentric muscle activity
 - ◉ Undertaking high-impact exercises on hard, noncompliant surfaces (ex: running on asphalt or concrete)^l

Plantar fasciitis (PF) is a painful inflammatory process of the plantar fascia, the connective tissue on the sole (bottom surface) of the foot. It is often caused by overuse of the plantar fascia or arch tendon of the foot. It is a very common condition and can be difficult to treat if not looked after properly. Another common term for the affliction is "policeman's heel".

Functional Anatomy & Kinesiology

Pillar 3: Trunk Stability

Pillar 4: Shoulder Complex

- Muscle Pathology
- RHM 5 step process
- Goal oriented program

Client Management Simulation



Hip Complex Mobility

3rd Pillar Active Knee Stability– actively stabilize the entire foot through the 7 PMP.

4th Pillar Active Hip Mobility – actively mobility the entire foot through the 7 PMP.

Function of the Knee

➡Knee Flexion

▸ Hamstrings:

- Bicep Femoris
- Semitendinosus
- Semimembranosus
- Gastrocnemius

➡Knee Extension

▸ Quadriceps:

- Rectus Femoris
- Vastus lateralis
- Vastus Intermedius
- Vastus medialis

Function of the Hip

➡ Hip External Rotation

- Piriformis
- Gluteus Medius
- Gluteus Maximus
- Psoas
- Iliacus

➡ Adductor Magnus (Posterior Fibers)

- Biceps Femoris
- Sartorius

➡ Hip Internal Rotation

- Gluteus Minimus
- Gluteus Medius (Anterior Fibers)
- Tensor Fascia Latae
- Adductors (PBLMG)
- Semimembranosus
- Semitendinosus

Function of the Hip

➡ Hip Flexion

- Psoas
- Rectus Femoris
- Iliacus
- Tensor Fascia Latae
- Adductors (PBLMG)
- Sartorius

➡ Hip Abduction

- Gluteus Medius
- Gluteus Minimus
- TFL
- Sartorius

➡ Hip Extension

- Gluteus Maximus
- Hamstrings:
 - Bicep Femoris
 - Semitendinosus
 - Semimembranosus

➡ Adductor Magnus (Posterior Fibers)

➡ Hip Adduction

- Adductor Magnus
- Adductor Longus
- Adductor Brevis
- Gracilis
- Pectineus

RHM

➡ Common Ailments & Imbalances

- Knee – Instability
- Hip joint – Immobility
- Trunk - Instability
- ACL/MCL/PCL/LCL tear
- Meniscus tear
- Ruptured tendon/muscle
- Fractures(Knee/Hip/Spine)
- Overuse(Bursitis & Tendonitis)
- Osteoporosis
- Lordosis
- IT Band Syndrome
- Piriformis Syndrome
- Sciatica & Pseudo sciatica
- Herniated Disc

➡ **5 Step Process**

- Assessment
- Inhibit
- Activate
- Strengthen
- Integrate

Common Ailments & Imbalances

- ITBS is one of the leading causes of lateral knee pain in runners. The iliotibial band is a superficial thickening of tissue on the outside of the knee, extending from the outside of the pelvis, over the hip and knee, and inserting just below the knee. The band is crucial to stabilizing the knee during running, moving from behind the femur to the front in stride. The continual rubbing of the band over the lateral femoral epicondyle, combined with the repeated flexion and extension of the knee during running may cause the area to become inflamed
- Piriformis syndrome is a neuromuscular disorder that occurs when the sciatic nerve is compressed or otherwise irritated by the piriformis muscle causing pain, tingling, and numbness in the buttocks and along the path of the sciatic nerve descending down the thigh and into the lower leg.
- Sciatica is a set of symptoms including pain that may be caused by general compression or irritation of one of five spinal nerve roots that give rise to each sciatic nerve, or by compression or irritation of either or both sciatic nerves. Symptoms include pain, numbness, or weakness in the lower back, buttock, and/or various parts of the leg and foot.
- Herniated disc (prolapsed disci intervertebralis) is a medical condition affecting the spine due to trauma, lifting injuries, or idiopathic (unknown) causes in which a tear in the outer, fibrous ring (annulus fibrosus) of an intervertebral disc (discus intervertebralis) allows the soft, central portion (nucleus pulposus) to bulge out beyond the damaged outer rings

Functional Anatomy & Kinesiology

Pillar 5: Trunk Stability

Pillar 6: Shoulder Complex

Pillar 7: Neck

- Muscle Pathology
- RHM 5 step process
- Goal oriented program

Client Management Simulation



Shoulder Complex Mobility

5th Pillar Active Trunk Stability - actively stabilize the entire foot through the 7 PMP.

6th Pillar Active Shoulder Mobility – actively mobility the entire foot through the 7 PMP

7th Pillar Active Neck Stability– actively stabilize the entire foot through the 7 PMP.

Function of the Trunk

➡ Trunk Flexion

- Rectus Abdominis
- External Obliques
- Internal Obliques

➡ Trunk Extension

- Erector Spinae

➡ Lateral Flexion of Trunk

- Quadratus Lumborum
- Unilateral Erector Spinae
- Internal Oblique

➡ Trunk Rotation

- Internal Oblique
- External Oblique

Function of the Trunk

- **Trunk Rotation:** Internal & External oblique's, Multifidus, Iliocostalus Lumborum However, when acting bilaterally, these muscles contribute a sagittal plane moment and may also increase intra-abdominal pressure when activated simultaneously with its antagonist.
- **Sagittal Plane Movement:** Chief muscles of the core that function in the sagittal plane include the rectus abdominis, transverse abdominis, erector spinae, multifidus, gluteus maximus, and hamstrings. Specifically, the rectus abdominis is active in trunk flexion; in combination with the hamstrings, it rotates the pelvis posteriorly. The gluteus maximus is important in transferring forces from the lower extremities to the trunk
- **Lateral Plane Movement:** Chief lateral muscles of the hip and trunk that function in the frontal plane include the gluteus medius, gluteus minimus, and quadratus lumborum
 - Core stabilization is composed of 3 subsystems: Passive (ligaments, bones), Active (core muscles) and Neural (activation and feedback by the nervous system)
 - ◎ **Passive**
 - Spinal stability is dependent on the structure of the spine (the bony alignment, and the ligaments that hold each segment together). The muscular support actively holds the spine in an optimum position (neutral position).
 - ◎ **Active**
 - Mobilizers
 - Mobilizers of the spine are the more superficial muscles that cross over multiple joints so that when they contract, they move many joints at once: the rectus abdominis, oblique's, lateral portions of erector spinae, latissimus dorsi, quadratus lumborum
 - Stabilizers
 - The primary deep stabilizers are the core muscles that go from spinal segment to spinal segment: multifidus, rotators, transverses abdominis
 - ◎ **Neural**
 - Neural control centers provide sensory feedback from both systems and are responsible for the timing of muscles that support the spine.

Function of the Scapula

➡Elevation

- Upper Trapezius
- Levator Scapulae

➡Depression

- Pectoralis Minor
- Lower Trapezius

➡Protraction

- Serratus Anterior
- Pectoralis Minor

➡Retraction

- Middle Trapezius
- Rhomboids

➡Upward rotation

- Serratus Anterior
- Upper Trapezius

➡Downward rotation

- Rhomboids
- Pectoralis Minor

Function of the Glenohumeral Joint

➡ Shoulder Flexion

- Anterior Deltoid
- Clavicular Head of Pectoralis Major
- Coracobrachialis

➡ Shoulder Adduction

- Latissimus Dorsi
- Teres Major
- Triceps Brachii (long head)
- Sternal Head of Pectoralis Major

➡ Shoulder Extension

- Latissimus Dorsi
- Posterior Deltoid
- Teres Major
- Triceps Brachii (long head)

➡ Shoulder Abduction

- Deltoid
- Supraspinatus (First 90 degrees)

Function of the Glenohumeral Joint (con't)

➡ Horizontal Flexion/Adduction

- Pectoralis Major
- Anterior Deltoid
- Coracobrachialis

➡ Shoulder Internal Rotation

- Subscapularis
- Latissimus Dorsi
- Pectoralis Major
- Teres Major
- Bicep Brachii (long head)
- Anterior Deltoid

➡ Horizontal Extension/Abduction

- Posterior Deltoid

➡ Shoulder External Rotation

- Infraspinatus
- Teres Minor
- Posterior Deltoid

Functional Anatomy of the Elbow Joint

- ➡ Elbow Flexion
 - Brachioradialis
 - Brachialis
 - Bicep Brachii
- ➡ Elbow Extension
 - Triceps (all heads)
- ➡ Radioulnar Supination
 - Bicep Brachii
 - Brachioradialis

RHM

- ***Common Ailments & Imbalances***

- ➡ Neck - Instability
- ➡ Shoulder– Immobility
- ➡ Trunk - Instability
- ➡ Ruptured tendon/muscle
- ➡ Fractures(Shoulder complex)
- ➡ Overuse(Bursitis & Tendonitis)
- ➡ Osteoporosis
- ➡ Lordosis
- ➡ Herniated Disc
- ➡ Impingement syndrome
- ➡ Rotator cuff tears

- ***5 Step Process***

- ➡ Assessment
- ➡ Inhibit
- ➡ Activate
- ➡ Strengthen
- ➡ Integrate

Common Ailments & Imbalances

- Shoulder impingement syndrome, also called painful arc syndrome, supraspinatus syndrome, swimmer's shoulder, and thrower's shoulder, is a clinical syndrome which occurs when the tendons of the rotator cuff muscles become irritated and inflamed as they pass through the subacromial space, the passage beneath the acromion. This can result in pain, weakness and loss of movement at the shoulder
- Source of Pain - The rotator cuff muscle tendons pass through a narrow space between the acromion process of the scapula and the head of the humerus. Anything which causes further narrowing of this space can result in impingement syndrome. This can be caused by bony structures such as subacromial spurs (bony projections from the acromion), osteoarthritis spurs on the acromioclavicular joint, and variations in the shape of the acromion.
- Shoulder Ailments including pain, are one of the more common reasons for physician visits for musculoskeletal symptoms. The shoulder is the most movable joint in the body. However, it is an unstable joint because of the range of motion allowed. This instability increases the likelihood of joint injury, often leading to a degenerative process in which tissues break down and no longer function well.



PEAK VITALITY

SOLUTIONS

Thank you for coming to the “Foundation of Human Movement 1” Workshop! You are one step closer to providing your clients with optimized education around restorative human movement!!

We look forward to seeing you and your clients on the other side of transformation!!

If you have any questions, please reach out to our client manager at
clients@peakvitalitysolutions.com