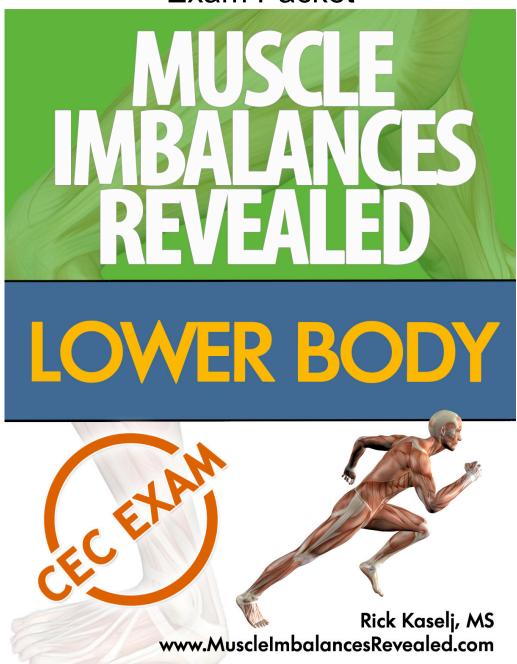
# Muscle Imbalances Revealed Exam Packet



- Edition 2 -

Exam Packet

#### **Unconditional Guarantee**

If you are not completely satisfied with the Healing Through Movement correspondence course *Muscle Imbalances Revealed – Lower Body System*, you may exchange your course or receive a full refund, period.

#### Copyright

©2010 by Healing Through Movement. All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as may be expressly permitted by the 1976 Copyright Act or in writing by the publisher.

#### Disclaimer

Healing Through Movement educational products are informational only. The data and information contained in Healing Through Movement educational products are based upon information from various published as well as unpublished sources and merely represent general training, exercise, and health literature and practices as summarized by the authors and editors. Care has been taken to confirm the accuracy of the information presented and to describe generally accepted practice. However, the author and publisher are not responsible for errors or omissions or for any consequences from application of the information in the educational products. As publisher and distributor of educational products Healing Through Movement makes no guarantees or warranties, express or implied, regarding the currentness, completeness, or scientific accuracy of this information, nor does the publisher/distributor guarantee or warrant the fitness, marketability, efficacy, or accuracy of this information for any particular purpose. Information from unpublished sources, books, research journals, and articles is not intended to replace the advice or attention of medical or healthcare professionals. This summary is also not intended to direct anyone's behavior or replace anyone's independent professional judgment. If you have a problem with your health, before you embark on any health, fitness, or sports training program, including the programs herein, please seek advice and clearance from a qualified medical or healthcare professional. The publishers have made every effort to trace the copyright holders for borrowed material. If they have inadvertently overlooked any, they will be pleased to make necessary arrangements at the first opportunity.

# Contents

Course Syllabus	4
Course Materials	4
Course Instructions	4
Course Description	5
Learning Objectives	5
Take Your Exam	7
Instructions	7
Taking Your Exam	7
Exam Answer Sheet – Edition 1	8
Muscle Imbalances Revealed – Lower Body System Exam	9
Course Evaluation	19
Certificate Information	20

# **Course Syllabus**

Welcome to the Exercises for Injuries correspondence course *Muscle Imbalances Revealed – Lower Body System.* 

### **Course Materials**

Muscle Imbalances Revealed course materials are as follows:

- Muscle Imbalances Revealed webinar series 7 webinars
- Exam Packet

### Course Instructions

This course is self-directed, which enables you to work at your own pace without the help of an instructor. We recommend that you complete the course and take the exam within the year you purchased the course. The following sequence is an effective way to complete the course.

- 1. **Learn** Watch the 7 *Muscle Imbalances Revealed* webinar.
- 2. **Practice** Perform each of the exercises before teaching them to your clients.
- 3. **Test** Complete the exam, course evaluation, and certificate information. For successful completion, a minimum of 48 out of 60 points (80%) must be achieved on the exam. Instructions for taking the exam are on page 7.

## Course Description

As a fitness professional we often just focus on strength, flexibility and cardiovascular techniques with our clients in order to help them reach their goals. By just focusing on these three exercise techniques you hamper your client's ability to overcome injuries, bust through fitness plateaus and stay injury-free. To get past this what you need in your toolbox is a full understanding of muscle imbalances.

Muscle Imbalances Revealed goes beyond stretching what is tight, strengthening what is weak or just performing corrective exercises. It assists the fitness professional in understanding the synergies that exist within the body and walks you through the intricacies of muscle imbalances. In Muscle Imbalances Revealed, the fitness professional will be guided by 6 experts from various professions on how to identify, address and perform the most effective exercises to address muscle imbalances and increase the speed of injury recovery, bust through fitness plateaus and prevent injuries.

## Learning Objectives

### At the completion of this course you will be able to:

- What is the problem with lower body injuries and muscle imbalances?
- Common lower body injuries due to muscle imbalances
- 3 common areas for muscle imbalances
- Training mistakes that lead to muscle imbalances
- Specific assessment for lower body muscle imbalances
- The 5 functional movements of the human body
- 3 corrective strategies for the squat
- 4 correction strategies for the lunge
- 3 reasons to use the stability ball for muscle imbalance training
- Stability ball exercises for lower body muscle imbalance training
- Flexibility exercises to address muscle imbalances
- Identify the four keys to proper hip function
- Understand the importance of looking at the body from top to bottom
- Perform guick and easy assessments of the hip
- Prescribe effective exercises to improve hip function
- Lean what is mobility and why it is so important to all our clients
- Discover who should be and who should not be doing mobility exercises
- Have exercises to improve mobility presented to you
- The 5 kinetic chain checkpoints

Exam Packet

\_\_\_\_\_

- 4 components of a SICK scapulae
- How muscle imbalances affect the cumulative injury cycle
- Which assessment is must to screen for future shoulder injuries?
- 4 effective tests for the shoulder
- Self care techniques for the shoulder
- Benefits of myofascial release
- Contraindication for myofascial release
- What we think we know about lower back injuries and anatomy
- What happens if the fascia is dysfunctional or degenerative in the body?
- What is fascia and what happens if we did not have fascia
- Why you need to know about fascia mechanical dysfunction
- Can water help your with your lower back pain

\_\_\_\_\_

# **Take Your Exam**

### Instructions

- Only one person may receive continuing education credits for this exam.
- This is an open book exam.
- Select the best possible answer for each test question.
- Score your answers on the Exam Answer Sheet.
- Keep a copy of your exam for your records.

## **Taking Your Exam**

Complete the below exam form.

After completing the exam, please email, fax or mail the course evaluation, certificate information and completed answer sheet to Exercises for Injuries.

E-mail: rick@ExercisesForInjuries.com

<u>Fax</u>: (604) 677-5425

Mail:

RK Healing Through Movement Attention: Rick Kaselj #199 – 19567 Fraser Highway Surrey, BC V3S 9A4 Canada

Note: To receive CECs/CEUs for this course, complete the exam and submit it for scoring within the year you purchased the course.

Please also complete the Course Evaluation and Certificate Information and send them in with your completed answer sheet.

# Muscle Imbalances Revealed

Exam Answer Sheet - Edition 2 -

Phone			Score (60 possible)			
Plea	ase circle your answers (no Xs or bla	ckout	3)			
1.	ABCD	31.	ABCD			

Name \_\_\_\_\_ Date \_\_\_\_\_

- 2. ABCD 3. A B C D 4. ABCD 5. A B C D 6. ABCD 7. ABCD 8. A B C D 9. A B C D 10. ABCD 11. ABCD
- 12. A B C D 13. ABCD
- 14. ABCD 15. ABCD
- 16. ABCD 17. ABCD
- 18. A B C D 19. ABCD
- 20. A B C D 21. ABCD
- 22. ABCD 23. ABCD
- 24. ABCD
- 25. ABCD
- 26. ABCD
- 27. ABCD 28. ABCD
- 29. ABCD
- 30. ABCD

- 32. ABCD 33. ABCD
- 34. ABCD
- 35. ABCD
- 36. ABCD
- 37. ABCD 38. ABCD
- 39. ABCD
- 40. ABCD
- 41. ABCD
- 42. ABCD
- 43. ABCD 44. ABCD
- 45. ABCD
- 46. ABCD
- 47. ABCD
- 48. ABCD
- 49. ABCD
- 50. ABCD 51. ABCD
- 52. ABCD
- 53. ABCD
- 54. ABCD
- 55. ABCD
- 56. ABCD
- 57. ABCD
- 58. ABCD 59. ABCD
- 60. ABCD

# Video Webinar 1: Addressing & Identifying Muscular Imbalances in the Hip & Pelvis with Mike Robertson

- 1. What are the four keys to proper hip function?
  - a. Mobility, motor control, power, strength
  - b. Cardiovascular, strength, flexibility, power
  - c. Mobility, motor control, stability, strength
  - d. Range of motion, strength, deceleration, stability
- 2. Which does not occur during the pronation pattern?
  - a. Tibial external rotation
  - b. Tibial internal rotation
  - c. Femoral internal rotation
  - d. Pelvic anterior tilt
- 3. Which does not occur during the supination pattern?
  - a. Tibial external rotation
  - b. Tibial internal rotation
  - c. Femoral external rotation
  - d. Pelvic posterior tilt
- 4. These joints primarily need mobility:
  - a. Ankle, Hip, Knee, Lumbar spine
  - b. Ankle, Hip, Thoracic Spine
  - c. Thoracic spine, Hip, Knee, Lumbar spine
  - d. Ankle, Hip, Knee, Lumbar spine
- 5. What is the common result of the battle for pelvic alignment?
  - a. Hip flexors and spinal erectors are short and lead to an anterior pelvic tilt
  - b. External obliques, lower abs, glutes and hamstring are over active and lead to an anterior tilt
  - c. Over active rectus abdominus
  - d. Hip flexors and spinal erectors are long and lead to an posterior pelvic tilt
- 6. In the video of Molly performing a split squat, which movement was she not able to perform?
  - a. Ankle dorsiflexion
  - b. Hip external rotation
  - c. Hip extension
  - d. Hip flexion

#### 7. What does your hip assessment tell you?

- a. Hip mobility
- b. Hip motor control
- c. Hip strength
- d. All of the above

#### 8. What does a health body need?

- a. Mobility
- b. Hip motor control
- c. Strength
- d. All of the above

### 9. Key training principle to address with your client?

- a. Moving from integration on
- b. Moving from rehab to performance
- c. Focusing on corrective exercises
- d. Focusing on performance

### 10. Key training principle to address with your client?

- a. McGill, Corrective, Dynamic Stabilization
- b. Corrective, McGill Dynamic Stabilization
- c. Dynamic Stabilization, Corrective, McGill
- d. None of the above

# 11. Which is not one of the exercises in phase 2 of the pelvic stability and alignment program?

- a. Bird dog
- b. Planks
- c. Split-stance push/pull
- d. Push-ups

# 12. Which is not one of the exercises in phase 3 of the pelvic stability and alignment program?

- a. Push-ups
- b. Offset Loading
- c. Split-squat
- d. Side plank

#### 13. The four hip motor control movement that need to be focused on are:

- a. Hip flexion (above 90), hip extension, hip abduction, hip external rotation
- b. Hip flexion (below 90), hip extension, hip abduction, hip external rotation
- c. Hip flexion (above 90), hip extension, hip abduction, hip internal rotation
- d. None of the above

Exam Packet

### **Video Webinar 2: Mobility & Muscle Imbalances with Bill Hartman**

### 14. How is mobility different from flexibility/range of motion:

- a. Mobility is a gross movement concept
- b. Mobility is an isolation movement
- c. They are both the same
- d. Mobility is needed in order to have range of motion

### 15. Who should do mobility exercises?

- a. Fit individuals
- b. Seniors
- c. Everyone
- d. Athletes

### 16. What areas of the body do we lose mobility?

- a. Ankle
- b. Hip
- c. Thoracic spine
- d. We can lose it anywhere

### 17. Poor thoracic mobility will have the greatest effect on this joint?

- a. Shoulder
- b. Hip
- c. Knee
- d. Ankle

# 18. In order to improve thoracic mobility it is important to do thoracic mobility exercises in which direction?

- a. Extension
- b. Rotation
- c. Extension and rotation
- d. All of the above

# 19. When assessing the hip for mobility, which are the most important movements of the hip to look at?

- a. Adduction
- b. Extension
- c. Internal rotation
- d. All of the above

# 20. If you have decrease in adduction of the hip which movement is there most often a decrease in?

- a. External rotation
- b. Internal rotation
- c. Extension
- d. Flexion

# 21. If your client has limited hip adduction range of motion but has full hip extension, what is this indicative of?

- a. Sign of joint damage
- b. Posterior hip ligaments have been over stretched
- c. Anterior hip ligaments have been over stretched
- d. Anterior hip flexor muscle are very strong

# 22. When performing a knee to wall ankle mobility exercise, what is a key way of cheating during the mobility exercise?

- a. Pronation of the foot
- b. Supination of the foot
- c. Over active gastroc
- d. Excess weight on heel

#### 23. What are key points to remember about mobility?

- a. Adapt mobility exercises to the client
- b. We must consider both mobility and stability with our clients
- c. It is key to look at both passive and active mobility
- d. All of the above

# Video Webinar 3: Maximizing Strength & Stability of the Knee with Rick Kaselj

# 24. Which of the following DOES NOT increase the stress on the knee (patellofemoral joint)?

- a. Deep squat
- b. Hamstring tightness
- c. Calf tightness
- d. Front squat

# 25. Which is one of the recommendations for doing leg extension with an ACL injury?

- a. Do not do leg extension exercises
- b. Do not do the end part of extension of the exercise
- c. Do not do it after 6 week from surgery
- d. Do not do the start of the leg extension movement

# 26. Which is NOT one of the components of an exercise program to rehabilitate an ACL injury?

- a. Upper body exercises
- b. Balance exercises
- c. Agility drills
- d. Plyometric exercises

Exam Packet

### 27. Which is not one of the exercises for preventing an ACL injury?

- a. Circle shuffle
- b. Bounding
- c. Front plank
- d. Leg press

### 28. What can be one of the consequences of an ACL injury?

- a. Decrease risk of patellar injuries
- b. Increase risk of ankle sprains
- c. Decrease risk of degenerative changes in the knee
- d. Increase risk of meniscal injuries

# Video Webinar 4: Identifying Muscular Imbalances in the Lower Body with Kevin Yates

# 29. With an increase in technology in fitness, what kind of injuries have increased over time?

- a. Overuse
- b. Trauma
- c. Falls
- d. Muscular

### 30. What is one of the benefits of technology in fitness?

- a. Compromise normal function of the body
- b. Isolating body parts
- c. Comfort and ease of use
- d. Single plane dominant training

### 31. What plane of movement are most people strong in?

- a. Oblique
- b. Frontal
- c. Transverse
- d. Sagittal

### 32. What joints are most commonly injured in the lower body?

- a. Hip
- b. Knees
- c. Ankles
- d. All of the above

#### 33. What is the most common cause of overuse injuries?

- a. Fall
- b. Age
- c. Muscular imbalances
- d. Gender

### 34. What are common causes of lower body muscle imbalances?

- a. Performing the same routine over again and again
- b. Not doing strengthening exercises
- c. Not stretching enough
- d. The body shape a client has

# 35. What is a common exercise prescription error made with clients with muscle imbalances?

- a. Perform exercises that promote the muscle imbalance
- b. Addressing symptoms rather than causes
- c. Not doing enough stretching
- d. Focusing on strength only

# 36. What is a common error made when looking at the big picture of muscle imbalances?

- a. Focusing on symptom management
- b. Not strengthening enough
- c. Not considering other injuries the client has had
- d. Avoiding functional movements

#### 37. What is a common effect of muscular imbalances?

- a. Increase potential for injuries
- b. Decrease in muscle and joint stress
- c. Increase in strength and stability
- d. Increase in balance and coordination

#### 38. What are the 3 common areas of muscle imbalances?

- a. Ankle, back, shoulder complexes
- b. Hip, knee, abdominal complexes
- c. Neck, abdominal, hip complexes
- d. Upper/mid-back, abdominal, hip complexes

### 39. What is a common training mistake leading to muscle imbalances?

- a. Feet wider than shoulders
- b. Toes pointed straight ahead
- c. Having the hips move backwards
- d. Over activating the core

# 40. What is a common training mistake leading to muscle imbalances when performing the lunge?

- a. Pushing from the heels
- b. Leaning on the back leg
- c. Leaning the trunk forward
- d. Front knee moving over front toe

# Video Webinar 5: Addressing Muscular Imbalances in the Lower Body with Kevin Yates

# 41. How can we make the compensation of the lower body stand out better during an assessment?

- a. Get the client to close their eyes
- b. Increase the speed the client moves for example from walking to jogging
- c. View the client from multiple angles
- d. There is no way of doing this.

### 42. What are the 5 functional movements of the human body?

- a. Push, pull, squat, balance, jump
- b. Run, walk, standing, single leg hop, double leg hop
- c. Squat, pull, push, lunge, rotation
- d. Squat, pull push, single leg, rotation

### 43. Which is not a key corrective strategy for the squat?

- a. Keep feet hip width apart
- b. Keep toes and heels in a straight line
- c. Driving hips back and down
- d. Keeping feet greater than hip width apart

### 44. Which is <u>not</u> a key strategy for the lunge?

- a. Keep toes pointed straight ahead
- b. Weight bearing on the toes
- c. Slightly forward trunk position
- d. Proper hip movement

### 45. Which is the most effective type of stretch for muscle imbalances?

- a. Active
- b. Dynamic
- c. Static
- d. Ballistic

# 46. Which muscles are focused on during the active flexibility exercise – Push-up Hip Drop?

- a. Calf
- b. Hamstring, hip flexor, adductors
- c. Hamstring and quadriceps
- d. Adductors and gluteus maximus

### Video Webinar 6: Addressing Muscular Imbalances in the Shoulder with Eric Beard

- 47. Percent of clients that are diagnosed with shoulder impingement will end of having surgery?
  - a. 15 to 28
  - b. 10 to 15
  - c. 20 to 30
  - d. 12 to 18
- 48. What are common causes of shoulder impingement?
  - a. Sleeping in awkward position
  - b. Wearing large man satchel
  - c. Being in poor posture
  - d. All of the above
- 49. Which system is involved in joint alignment and function?
  - a. Articular system
  - b. Nervous system
  - c. Muscular system
  - d. Skeletal system
- 50. Muscles that are imbalances have:
  - a. Good blood flow
  - b. Poor force producing ability
  - c. Decrease strain on joints
  - d. An ideal length
- 51. Which is not one of the five kinetic chain checkpoints?
  - a. Feet
  - b. Knees
  - c. Elbow
  - d. Head
- 52. Women have what degree of anterior tilt?
  - a. 3 to 5 degrees
  - b. 5 to 7 degrees
  - c. 0 to 1 degrees
  - d. 8 to 10 degrees

Exam Packet

\_\_\_\_\_

# 53. Which is not a transverse plane movement that the glenohumeral joint can do?

- a. Scaption
- b. Horizontal abduction
- c. Horizontal adduction
- d. None of the above

### 54. How many movement can the scapulothoracic joint perform?

- a. 6
- b. 8
- c. 10
- d. 12

### 55. Which is not a step in the cumulative injury cycle?

- a. Muscle imbalances
- b. Joint movement
- c. Muscle spasm
- d. Tissue trauma

#### 56. What is a normal GIRD?

- a. Less than 70 degrees
- b. Greater than 70 degrees
- c. 50 degrees
- d. 90 degrees

# 57. What is a self-care technique that is missing from the list discussed in the presentation?

- a. Ergonomics
- b. Balance training
- c. Massage therapy
- d. Education

# Video Webinar 7: Strength Training Low Back Injuries with Myofascial Sling Systems with Dean Somerset

#### 58. Which of the below statements is true?

- a. Muscles have defined and specific origins and insertions
- b. The muscle fiber is the only part of the motor unit that can undergo contraction
- c. The sensory fibers for muscles are the Golgi tendon organ and muscle spindle
- d. Muscles interconnect through fascial networks to form more powerful muscles

Exam Packet

- 59. What is tensile strength of fascia?
  - a. 2000
  - b. 4700
  - c. 3000
  - d. 5000
- 60. What muscle does the latissimus dorsi fibers connect with through the thoracolumbar fascia connect with?
  - a. Rectus femoris
  - b. Iliotibial band
  - c. Gluteus maximus
  - d. Gluteus minimus

\_\_\_\_\_

## Muscle Imbalances Revealed

# **Course Evaluation**

Thank you for completing this evaluation. Your responses will help us in our efforts to continuously improve this course. Please rate the following on a scale of 1–5 (circle one).

The course content covers stated objectives The content is up-to-date and comprehensiv It was clear how to use the course materials. I am able to apply what I've learned. This course met my expectations. The customer service representative was knowledgeable of product. The customer service representative was courteous and handled my call efficiently.	e. 1	gree 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 3 3 3	Stroi 4 4 4 4 4 4	ngly disagree 5 5 5 5 5 5 5
Would you recommend this course to a frien	d or collea	gue?	Yes	No	
Describe how you will be able to apply the co	ontent in th	nis cou	rse to	your w	ork.
What have you gained from this course?					
Any recommendations or general comments?					
Please share with us the name of a friend or colleague who would be interested in receiving information about Healing Through Movement courses.					
NameAddressEmail					
May we have your permission to use your comments and name in future publicity about our programs?					
Yes No If yes, please sign here					
Thank you for completing this evaluation.					
You must email, fax or mail these pages: Answer Sheet, Course Evaluation, and Certificate Information.					

\_\_\_\_\_

## Muscle Imbalances Revealed

# **Certificate Information**

- Legibly print your name as you would like it to appear on your Certificate of Achievement.
- Place a check mark next to each of the certification(s) you are renewing. This information is
- Necessary for you to receive a Certificate of Achievement.
- Return only the Exam Answer Sheet(s), Course Evaluation, and Certificate Information.
- · Use black ink when faxing.
- Fax or mail to: RK Healing Through Movement, Attention: Rick Kaselj, #199 19567 Fraser Highway Surrey, BC V3S 9A4 Canada / Fax: (604) 677-5425
- Keep a copy of your Certificate of Achievement for your records.

Name			
Title/Occupation			
Address			
City	_ State/Prov	Zip	_ Country
Phone ( )	Email		_

Have you changed your address since you purchased this course? Yes / No

V	CECs	Certification	Association
	0.6	NSCA	National Strength & Conditioning Association
	0.7	ACE	American Council on Exercise
	6.0	BCRPA	British Columbia Recreation & Parks Association
	6.0	BCAK	British Columbia Association of Kinesiologists
	5.0	BCCMT	British Columbia College of Massage Therapists
	6	CSEP	Canadian Society of Exercise Physiologists
	3.0	CanFitPro	CanFitPro
	0.6	NASM	National Academy of Sports Medicine
	6.0	AFLCA	Alberta Fitness Leadership Certification Association
	6.0	OFC	Ontario Fitness Council
	Pending	FA	Fitness Australia

If your association has not pre-approved this course, you may petition your association for the CECs.