## ITEC Level 5 Certificate in Sports Massage Therapy
### Unit 459 – Conduct Complex Assessment for Sports Massage

**Recommended Learning Hours – GLH 42 Credit Value 7**

QCF Qualification Reference Number – H/506/9010

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Taught Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Understand neurological presentations</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **1.1 Describe the pathways of peripheral nerves** | 1.1.1 To include:  
Receptors: Exteroceptors; interoceptors; proprioceptors  
Sensory modalities: Somatic senses; Visceral senses; Special senses  
12 pairs of cranial nerves (sensory, motor, mixed); 31 pairs of spinal nerves (cervical, thoracic, lumbar, sacral, coccygeal)  
Nerve plexuses (cervical, brachial, lumbosacral)  
Intercostal nerves  
Posterior root and posterior root ganglion  
Anterior root  
Somatic nerves (motor & sensory)  
Autonomic nerves (motor & sensory) (sympathetic, parasympathetic)  
Enteric nerves (motor & sensory)  
Ganglia  
Synapses |
| **1.2 Define the characteristics of:**  
- Dermatomes  
- Myotomes | 1.2.1 To include:  
Dermatomes: Spinal nerves and sensation  
Myotomes: Motor supply and muscles: C1/C2, neck flexion/extension; C3, neck lateral flexion; C4, shoulder elevation; C5, shoulder abduction; C6, elbow flexion/wrist extension; C7, elbow extension/wrist flexion; C8, finger flexion; T1, finger abstraction; L2, hip flexion; L3, knee extension; L4, ankle dorsi-flexion; L5, great toe extension; S1, ankle plantar-flexion/foot eversion/hip extension; S2, knee flexion; perineal reflex |
| **1.3 Explain the organisation of dermatomes** | 1.3.1 To include:  
Cranial nerve: Trigeminal nerve: anterior scalp and face  
Spinal nerves: C2 Posterior head  
C3-T1 Neck, arms and hands  
T2-L1 Trunk  
L2-S2 Legs and feet  
S3-S5 Perineum |
| **1.4 Describe common causes of** | 1.4.1 To include: |
1.5 Describe common peripheral neuropathy patterns

- Sciatica
- Femoral neuropathy
- Obturator neuropathy
- Carpal tunnel syndrome
- Morton’s neuroma
- Piriformis syndrome
- Trigeminal neuralgia
- Bell’s palsy
- Ulnar nerve palsy
- Radial nerve palsy
- Peroneal nerve palsy
- Diabetic neuropathy
- Cervical spondylosis
- Axillary nerve palsy
- Brachial neuritis
- Optic neuritis
- Vestibular neuritis
- Spinal cord injuries
- Intervertebral disc prolapse

1.6 Describe presentations that warrant neurological testing

- Radicular pain
- Paresthesias: pins and needles; formication; tingling; tickling; pricking; burning sensations
- Muscular weakness
- Muscular flaccidity
- Loss of mobility
- Loss of sensation
- Involuntary muscle contractions
- Difficulty in masticating
- Loss of bladder or bowel control
- Tremors
- Fasciculation

1.7 Describe the pathophysiology of common neurological injuries/soft tissue dysfunction

- Ankle/foot/lower leg
  - Sprains: Anterior talofibular ligament, calcaneofibular ligament, posterior talofibular ligament, medial ligament
  - Syndesmosis injury
  - Fractures of the ankle region
  - Osteochondritis dissecans of the talus
  - Ankle hyperflexion or hyperextension injuries
  - Peroneal tendon dislocation
  - Tibialis posterior syndrome
  - Calcaneal bursitis
  - Plantar fasciitis
  - Tarsal tunnel syndrome
  - Entrapment of medial calcaneal nerve
  - Stress fractures: calcaneus, navicular, metatarsals
  - Fractures of talus, calcaneus and metatarsals
  - Pes planus
  - Pes cavus
  - Hallux valgus
  - Hammer toe
  - Hallux rigidus
  - Morton’s neuroma
  - Compartment syndromes
  - Intermuscular and intramuscular haematoma
  - Tibialis anterior syndrome
  - Stress fractures to tibia and fibula
  - Medial tibial stress syndrome (shin splints)
  - Gastrocnemius and soleus strain
  - Common peroneal nerve injury
  - Achilles tendon rupture
  - Achilles tendinitis

- Thigh/knee
  - Ligament sprains: medial collateral, lateral collateral, anterior cruciate, posterior cruciate
  - Meniscal tears
  - Articular cartilage injuries
  - Osteochondritis dissecans
  - Patello-femoral pain syndrome (chondromalacia patellae)
  - Patella dislocation
  - Patellar tendon injury
  - Osgood-Schlatter’s disease
  - Bursitis
  - Baker’s cyst
  - Ilio-tibial band syndrome
  - Patellar fractures
  - Quadriceps strains
  - Hamstring strains

- Hip region
  - Adductor strains
  - Ilio-psoas (flexor) strain
  - Strain to upper rectus femoris
  - Inflammation and strain to abdominal muscles
  - Osteoarthritis
  - Hip dislocation
  - Fractures to neck and shaft of femur
  - Inguinal hernia
  - Piriformis syndrome
  - Sciatica
  - Femoral neuropathy
  - Obturator neuropathy
  - Sacroiliac inflammation and dysfunction
  - Osteitis pubis
1.8 Explain the importance of referral for neurological testing

• Trochanteric bursitis • Perthes’ disease

1.7.4 To include:

**Shoulder region**
- Shoulder dislocation
- Acromioclavicular injury
- Sternoclavicular injury
- Glenoid labrum tear
- Rotator cuff tears
- Subacromial bursitis
- Impingement syndrome
- Dislocation of long head of biceps muscle
- Nerve injuries: suprascapular nerve; axillary nerve; long thoracic nerve; Pectoralis major rupture
- Rupture to long head of biceps
- Rupture of triceps tendon
- Axillary nerve palsy

1.7.5 To include:

**Elbow injuries**
- Lateral epicondylitis
- Medial epicondylitis
- Entrapment to radial, ulnar and median nerves
- Olecranon bursitis
- Elbow dislocation
- Osteochondritis dissecans
- Fractures: distal humerus (supracondylar fracture); head of radius; olecranon fracture

1.7.6 To include:

**Wrist and hand injuries**
- Colles’ fracture
- Scaphoid fracture
- Carpal tunnel syndrome
- De Quervain’s disease
- Ulnar neuritis
- Lunate dislocation
- Perilunar dislocation
- Scaphoid and lunate separation
- Kienböck’s disease
- Fracture to the hook of hamate
- Metacarpal fractures
- Ulnar collateral ligament rupture
- Mallet finger
- Finger-dislocations
- Infections to the fingers and palms
- Dupuytren’s contracture
- Volkmann’s contracture

1.7.7 To include:

**Back and neck**
- Torticollis
- Brachial plexus lesions
- Spondylolisthesis
- Scheuermann’s disease
- Spinal stenosis
- Intervertebral disc prolapse
- Scatica
- Ankylosing spondylitis
- Muscle strains
- Ligament sprains
- Facet syndrome

1.8.1 To include:

- Radiating pain and/or paraesthesia on objective testing
- Aggravated by objective testing
- Does not fit a specific peripheral nerve pattern
- Always refer with positive SLR slump or valsalva test
- Presence of red or yellow flags

**Learning Outcome**

2. Understand sports specific posture and gait

**Assessment Criteria**

2.1 Explain the phases of the gait cycle

2.1.1 To include:

- Stance phase: heel strike; foot flat; mid-stance; toe off
- Swing phase: acceleration; mid-swing; deceleration
| 2.2 | Outline the different methods used to analyse gait | 2.2.1 | To include:  
- Visual  
- Recording  
- Pressure mats  
2.3 | Describe foot deformities and their effects on gait | 2.3.1 | To include:  
- Pes planus  
- Pes cavus  
- Morton’s foot  
- Pronated foot  
- Supinated foot  
- Plantar-flexed first ray  
- Hammer toes  
- Congenital talipes equinovarus | 2.4 | Describe gait abnormalities | 2.4.1 | To include:  
- Propulsive gait  
- Scissors gait  
- Spastic gait  
- Circumduction gait  
- Hip hiking  
- Vaulting  
- Steppage gait  
- Waddling gait  
- Forward trunk bending  
- Backward trunk bending  
- Lateral trunk bending  
- Internal hip rotation  
- External hip rotation  
2.5 | Explain how postural deviations can affect sporting performance | 2.5.1 | To include:  
- Range of motion  
- Centre of gravity  
- Balance and vestibular function  
- Coordination  
- Head and eye position  
- Kinaesthetic awareness and proprioception  
- Risk of injury  
- Strength and power | 2.6 | Understand the principles of sports specific posture analysis | 2.6.1 | To include:  
- Review of specific sport and exercise programme  
- Sports-specific stresses and injury patterns  
- Asymmetrical usage and development  
- Other occupations of athletes  
- Hereditary and genetic factors  
- Indicators of illness and pathology  
- Post-injury atrophy and stiffness  
- Acute and chronic imbalances  
- Primary, secondary, adaptation and compensatory dysfunctions  
- Lateral gravity line: symmetry/asymmetry tests  
- Anteroposterior gravity line: Primary (kyphotic) curves; secondary (lordotic) curves; head and shoulder position; pelvic alignment; hip, knee and ankle position  
- Predictable patterns of dysfunction: upper and lower crossed syndromes |

**Learning Outcome**

3. Be able to undertake assessment of sports specific postures and gait

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Taught Content</th>
</tr>
</thead>
</table>
| 3.1 | Carry out gait analysis | 3.1.1 | To include:  
- Walking (front, rear, side view)  
- Base width  
- Swing width  
- Step length  
- Stride length  
- Abnormalities  
- Pelvic tilts  
- Pelvic hitch  
- Movement in the lumbar spine, hip, knee and ankle  
- Pronation  
- Supination  
- Strike |
| 3.2 | Interpret findings identifying strengths and areas for improvement | 3.2.1 | To include:  
- Asymmetry of stride  
- Pathologic gait pattern  
- Dysfunctional gait pattern (in the absence of pathology)  
- Swing of arms  
- Heel strike  
- Toe off  
- Spinal motion  
- Adaptation of shoulders  
- Hip motion |
<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Taught Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Critically evaluate the range of complex assessment methods used to gather information:</td>
<td>4.1.1 To include:</td>
</tr>
<tr>
<td>Subjective assessment:</td>
<td>Subjective assessment:</td>
</tr>
<tr>
<td>• Nature and purpose of subjective assessment • Validity and reliability of data • Accuracy of information • Possibility of deception • Interpretation of symptoms</td>
<td></td>
</tr>
<tr>
<td>4.1.2 Range of movement:</td>
<td>4.1.2 Range of movement:</td>
</tr>
<tr>
<td>• Reproducibility of testing • Use of visual estimation versus goniometry • Purposes of active and passive testing • Role of palpation and end feel • Concepts of ease and bind • Elastic, anatomic, physiologic, restrictive barriers • Tissues involved in the creation of barriers • Perception and apprehension of client • Range and quality of motion</td>
<td></td>
</tr>
<tr>
<td>4.1.3 Resisted testing:</td>
<td>4.1.3 Resisted testing:</td>
</tr>
<tr>
<td>• Assessment of strength • Elicitation of pain on resisted testing • Reliability of testing • Bilateral comparison</td>
<td></td>
</tr>
<tr>
<td>4.1.4 Postural analysis:</td>
<td>4.1.4 Postural analysis:</td>
</tr>
<tr>
<td>• Use of palpation with observation • Bilateral comparison in lateral gravity line • Deviation from the anteroposterior gravity line • Use of bony landmarks • Role of postural muscles • Anomalies in coronal, sagittal and horizontal planes • Bases of support: sacral base; feet • Centre of gravity • Patterns of fascial stress</td>
<td></td>
</tr>
<tr>
<td>4.1.5 Special tests</td>
<td>4.1.5 Special tests</td>
</tr>
<tr>
<td>Ankle and lower leg: Specific range of motion and strength testing • Inversion talar tilt test • Eversion talar tilt test • Anterior drawer test • Squeeze test • Intermetatarsal glide test • Interdigital neuroma test • Homan’s sign test • Metatarsal fracture test • Tinel’s sign test • Thompson’s test • Pes planus test</td>
<td></td>
</tr>
<tr>
<td>Knee: Specific range of motion and strength testing • Collateral ligament stability tests • Apley compression and distraction test • McMurray test • Steinmann test • Anterior drawer test • Posterior drawer test • Patellar compression test • Patellar glide test • Slocum test • Lachmann test • Quadriceps active (PCL) test</td>
<td></td>
</tr>
<tr>
<td>Hip: Specific range of motion and strength testing • FABERE (Patrick) test • Flexion (Thomas) test • Trendelenburg test • Leg length discrepancy testing • Ober test • Gaenslen’s sign • Sacroiliac mobility (Gillet’s) test • Sacroiliac ‘squish’ test • Sacroiliac gapping test • Piriformis length test • Ely’s test</td>
<td></td>
</tr>
<tr>
<td>Spine: Specific range of motion and strength testing • Straight leg raise • Valsalva manoeuvre • Slump test • Cervical compression and distraction tests • Adson test • Testing reflexes: Biceps reflex (C5); Triceps reflex (C7); Brachioradialis reflex (C6); Patellar tendon reflex (L4); Achilles tendon reflex (S1)</td>
<td></td>
</tr>
<tr>
<td>Shoulder: Specific range of motion and strength testing • Apley ‘scratch’ tests • Drop arm test • Apprehension test • Relocation test • Yergason test • Scapular winging test • Empty can test • Hawkins Kennedy test • Acromioclavicular cross arm test</td>
<td></td>
</tr>
<tr>
<td>Elbow: Specific range of motion and strength testing • Tinel’s sign • Medial and lateral epicondylitis tests • Varus and valgus stress tests • Test for cubital tunnel syndrome • Test for pronator teres syndrome</td>
<td></td>
</tr>
<tr>
<td>Wrist and hand: Specific range of motion and strength testing • Finkelstein test • Phalen’s test • Tinel’s sign • Murphy’s sign • Fromet’s sign • Long finger flexion test • Allen test for wrist and hand • Bunnel-Littler test • Ligamentous instability tests for wrist and hand</td>
<td></td>
</tr>
</tbody>
</table>
| 4.2 Explain yellow flags and their potential impact on prognosis | 4.2.1 To include:  
- Necessity for cognitive and behavioural intervention  
- Depression  
- Withdrawal from social contact  
- Negative thought pattern  
- Loss of motivation  
- Poor coping strategies: avoidance; alcohol; drug use  
- Agoraphobia  
- Panic attacks |
|---|---|
| 4.3 Explain red flags and the importance of urgent medical referral | 4.3.1 To include:  
- Fever  
- Neurological deficit  
- Significant weakness  
- Unexplained swelling or deformity  
- Sudden or inexplicable loss of weight  
- Persistently feeling unwell  
- Loss of appetite  
- Pain at night  
- Bladder or bowel incontinence  
- Increased muscle tone  
- Previous history of cancer  
- Morning stiffness |
| 4.4 Explain the process of clinical reasoning and stages of problem solving | 4.4.1 To include:  
- Hypothetico-deductive model of reasoning  
- Pattern recognition model of reasoning  
- Inferential process; collecting and evaluating subjective and objective data  
- Interaction between therapist, client and others involved in client care  
- Ethical reasoning |

### Learning Outcome

5. Be able to conduct complex assessment methods for sports massage

### Assessment Criteria

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Taught Content</th>
</tr>
</thead>
</table>
| 5.1 Carry out subjective assessments of clients | 5.1.1 To include:  
**Questions establish:** Personal details  
- Type of sport or physical activity; level of sport or physical activity (novice, club, county, national, international, elite); frequency of training or competition; previous injuries; medical history and medication; details of presenting complaint or injury  
- Consideration of yellow and red flags  
- Verbal and non-verbal communication  
- Contraindications |
| 5.2 Obtain consent for objective assessment | 5.2.1 To include:  
- Personal or written permission from client, parent, guardian, carer  
- GP permission  
- Record keeping and signatures |
| 5.3 Carry out objective assessments of clients | 5.3.1 To include:  
- Posture analysis  
- Range of movement testing  
- Strength testing  
- Special testing  
- Consideration of yellow and red flags |
| 5.4 Analyse subjective and objective findings | 5.4.1 To include:  
- Discernible reasoning strategy  
- Eliminate red and yellow flags  
- Objective data used as a means to confirm or refute subjective data  
- Formulation of a working hypothesis |
| 5.5 Complete clinical reasoning forms | 5.5.1 To include:  
- Record subjective and objective data  
- Log hypothesis and reasoning: probable condition with predisposing factors |
| 5.6 | Record clients' information in accordance with professional practice requirements | 5.6.1 To include:  
**First point of contact**  
- Personal and GP details; attain informed consent  
**Assessment and re-assessment**  
- Subjective data; objective data; indications; contraindications; referral; hypothesis/analysis; treatment plan; treatment and aftercare details logged; evaluation  |
| 5.7 | Store clients' information as legally required | 5.7.1 To include:  
- Data Protection Act • Legislation • Security • Organisation’s standards and procedures |

**Learning Outcome**

6. Be able to devise sport massage treatment plans from information gathered

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Taught Content</th>
</tr>
</thead>
</table>
| 6.1 Devise treatment plan | 6.1.1 To include:  
- Indications for massage • Adapting the treatment to meet the needs of the client • Soft tissue techniques  
- Aftercare/home care advice |
| 6.2 Explain rationale for chosen massage strategies | 6.2.1 To include:  
- Aims and objectives • Procedures • Techniques • Adaptations |
| 6.3 Present massage strategies and rationale to clients | 6.3.1 To include:  
- Nature • Purpose • Process |
| 6.4 Obtain consent to treatment | 6.4.1 To include:  
- Personal or written permission from the parent/guardian/carer is recommended if treating a client under 16 years of age  
- From a guardian/carer if a client is too ill to consent themselves • Having a chaperone present if necessary  
- Organisational procedures and policies regarding approved guidelines for the presence of a chaperone • From a GP if the client is taking medication or contraindicated in any way • Adequate disclosure of information: e.g., nature and purpose of treatment, its risk and consequences, alternative course of treatment • Competency • Welfare of client • Capacity for decision making • Client choice • Good practice • Ethical principles • Code of Conduct • Integrity • Respect  
- Professionalism • Consultation form (an example of a consultation form can be downloaded from [www.itecworld.co.uk](http://www.itecworld.co.uk))  
- Client signature |

**Assessment:**
Evidence of Client

Unit 459 – Conduct Complex Assessment for Sports Massage
| consultation/assessments carried out on 5 different clients Assignment - Research and Critically Evaluate Complex Assessment Techniques | **Consultation/Assessment Evidence:** Assessment should be carried out on 5 different clients relevant to the client’s condition and needs to include all joints of the body. This should be evidenced through the use of signed and dated consultation/assessment evidence forms which can be downloaded from [www.itecworld.co.uk](http://www.itecworld.co.uk)  **Assignment:** Assignment guidance form and assignment assessment form may be downloaded from [www.itecworld.co.uk](http://www.itecworld.co.uk) |