STOPS.physio FOR BACK PAIN SUMMARY

Specific Treatment of Problems of the Spine (STOPS) produces better outcomes. The key to success is a thorough assessment that classifies patients into one of the five STOPS subgroups, and the provision of individualised treatment that targets specific barriers to recovery.

Assessment

To accurately classify a patient into a STOPS subgroup the following information must be obtained (with particular importance in brackets) on assessment:

- A detailed history (recent and past symptoms, work, sport/recreation, response to STOPS types of treatment)
- Body chart including severity, irritability and nature of symptoms (Z-joint and disc hernation + radiculopathy)
- Aggravating and easing factors (discogenic problems)
- 24 hour behaviour including morning, end of the day and night symptoms (to determine inflammation)
- Special questions (imaging, medication, general health). Follow up of imaging report important for disc related subgroups
- Observation (posture, gait, functional testing/modification/retesting)
- Active movement testing (Z-joint)
- Neurological examination (disc herniation + radiculopathy)
- Provocative neurodynamic testing (disc herniation + radiculopathy)
- Palpation including passive accessory intervertebral movements (Z-joint)
- Passive physiological intervertebral movements
- Motor control including deep/local muscle function (transversus abdominis)
- Special diagnostic tests such McKenzie repeated movements or provocative sacro-iliac joint tests (reducible discogenic pain)
- Functional outcome measures such as the Oswestry
- Screening questionnaires such as the Örebro Musculoskeletal Pain Questionnaire for psychosocial risk factors (multifactorial persistent pain)

STOPS Subgroup Classification

The following criteria are essential for classifying the patient into one of the STOPS subgroups:

1. **Disc herniation + radiculopathy (DHR)** – below knee symptoms and disc herniation (having at least nerve root contact = greater certainty) on CT or MRI and at least one of positive straight leg raise or lower limb neurological sign
2. **Reducible discogenic pain** – positive to at least 4 (higher number = greater certainty) of aggravating factors of sitting, forward bending, lifting, sit to stand, cough/sneeze, worse next morning following injury, history of manual handling job, flexion/rotation mechanism of injury and positive response to mechanical loading strategies (most often extension in lying ± ipsilateral side glide aka hips away from painful side)
3. **Non-reducible discogenic pain** – positive to at least 4 of the discogenic factors and not responsive to mechanical loading strategies
4. **Z-joint pain** – at least 3 of unilateral symptoms, a regular “compression” pattern reproducing symptoms (usually active extension + ipsilateral lateral flexion), a comparable z-joint finding on lumbar palpation and positive response to mini-treatment
5. **Multi-factorial persistent pain** – not fitting any of the pathoanatomical subgroups and having an Örebro score of above 105/210 (high score = greater certainty)

Treatment

All patients (1, 2, 3 & 4) except those with multifactorial persistent pain (5):

- Treatment of inflammation including NSAIDs progressing to oral steroids if the patient had at least 2 of constant symptoms, getting out of bed at night due to the pain or early morning symptoms for at least 60 minutes
- Specific muscle activation of the local/deep muscles progressing to a functional motor control program comprising:
    - Usual commencement of specific activation of transversus abdominis ± pelvic floor in side lying, progressing to standing then walking
    - Collaborative identification of patient functional goals
    - Identification and correction of maladaptive postural/movement patterns
    - Progressive functional and goal oriented exercise program practicing correct motor control pattern
    - Exercise progressed in a pain contingent manner (respecting pain response)
- Progression away from a pathoanatomical to a psychosocial approach to treatment if the patient failed to respond to treatment and particularly if Örebro score increased over time

1 & 3. **Disc herniation + radiculopathy** and **non-reducible discogenic pain:**

- Pathoanatomical explanation
- Assessment and management of directional preference if present at any time during the treatment program (particularly after inflammation controlled)
- Lumbar taping in a neutral spine position until symptoms (particularly inflammation) controlled
- Postural education
- Specific muscle activation and functional motor control training

2. **Reducible discogenic pain**:

- Pathoanatomical explanation
- Assessment and management of directional preference including individualised mechanical loading strategies ever 1-2 hours (10-20 repetitions)
- Provision of a lumbar roll for sitting ± sleep (individualised depending on posture)
- Postural education
- Daily walking program
- Lumbar taping in a neutral spine position until symptoms (particularly inflammation) controlled
- Specific muscle activation and functional motor control training once symptoms under control

4. **Z-joint pain**:

- Pathoanatomical explanation
- Assessment and management of potential targets for manual therapy (commencing with the comparable lumbar sign on palpation) based on response to mini-treatment as well as within and between treatment response to main treatment
- Manual therapy applied with adherence to clinical reasoning principles including changing only treatment component per treatment, selecting an appropriate treatment grade (using movement diagram concepts), not under/over treating an area, exploring evolving concepts of contributing factors/structures to the patient's symptoms
- Specific muscle activation and functional motor control training once symptoms under control

5. **Multi-factorial persistent pain**:

- Pain education
- Collaborative goal setting
- Progressive functional and goal oriented exercise program practicing correct motor control pattern (only if some form of "physical" component of the treatment rationale needed for patient compliance)
- Exercise progressed in a collaboratively agreed upon time contingent manner (independent of pain response)
- Weaning and cessation of passive treatment

All treatments are reinforced by the STOPS.physio Patient Information Sheets.