

- **Acute back pain** is defined as back pain lasting less than 4 weeks. **Subacute back pain** last 4 to 12 weeks.
- **Chronic back pain** last more than 12 weeks.

Red flags Box 1

Qauda equina syndrome:

Saddle anaesthesia or parasthesia , perianal/perineal sensory loss, positive straight leg raise testing, multiple motor deficits, bowel/bladder dysfunction, fecal/urinary incontinence, severe(paralysis rather than paresis) or bilateral neurological compromise.

Spinal fracture:

Recent violent trauma(fall from big height, car accident), minor trauma in patient with osteoporosis, older age structural bone deformity, prolonged corticosteroids use, severe central back pain relieved by lying down.

Infection or cancer:

Age above 50 and below 20, constitutional symptoms(fever, weight loss, chills, malaise), history of cancer, pain on the thoracic spine, recent bacterial infection(e.g. Urinary tract or respiratory tract), immune depression(e.g. HIV, chemotherapy or IV drug users, prolonged use of corticosteroids, recent puncture wound or surgery, diabetes, spinal tenderness to percussion, recent or fast developing spinal deformity(e.g. scoliosis) , non-mechanical(not better with lying down) or progressive pain, failure to improve with treatment in 4-6 weeks, unremitting night time pain.

Abdominal aortic aneurysm:

Age above 60, history of cardiovascular disease(e.g. MI or stroke) , pulsating mass on the abdomen, leg pain, thoracic pain, absent of aggravating features.

Spondylo-arthritis:

Age lower than 45 , morning stiffness improve with exercise, alternating buttock pain, significant and persistent lumbar flexion restriction(positive Schobers test), awakening because of back pain during second part of night, oligo-arthritis or poly-arthritis, skin rash, diarrhea, hypersensitivity to NSAID.

GI or genitourinary:

Abdominal or flank pain/tenderness, rebound tenderness, costo-vertebral angle tenderness, reduced urine stream, reduced stool caliber, dysuria, abnormal urine or stool coloration/smell, diarrhea, constipation, anuria, oliguria, polyuria, abnormal menses, dyspareunia, painful erection.

Patient present with chronic low back pain

Conduct Full back Assessment

Historytaking, physical and neurological exam, evaluation of red flags Box 1
 Confirm the diagnosis of chronic low back pain which should include spine x-ray

•Presence of red flags or significant concern for serious pathology? Box 1

•Or presence of spinal pathology other than:

- Degenerative Disc Disease
- Spondylolisthesis
- Sciatica/Radiculopathy or Facet Arthrosis

↓ No

Patient had physical therapy done in the last 3 months?
 OR
 Patient with mild pain and no functional limitation

Yes ↓

- Patients should be encouraged to increase their overall activity level. Minimum of 30 minutes of daily recreational activity is recommended
 - Provide patient with pamphlet that contain different type of exercises that has quality evidence of efficacy.

No ↓

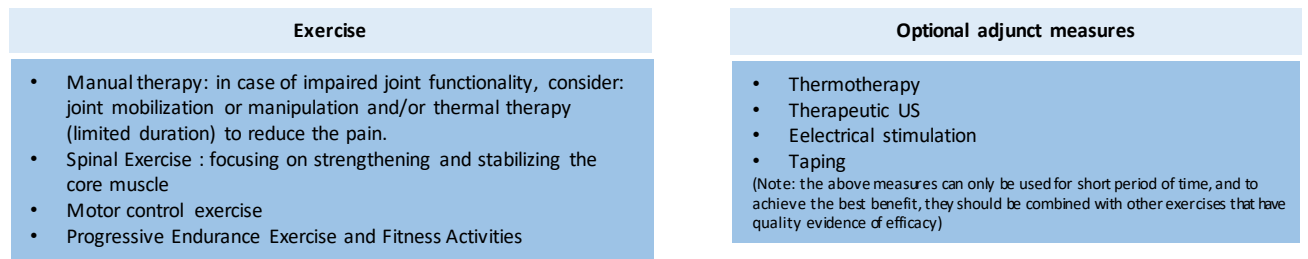
-Physical therapy referral
 -Ask the patient to fill Oswestry questionnaire (as baseline)

↓ Yes

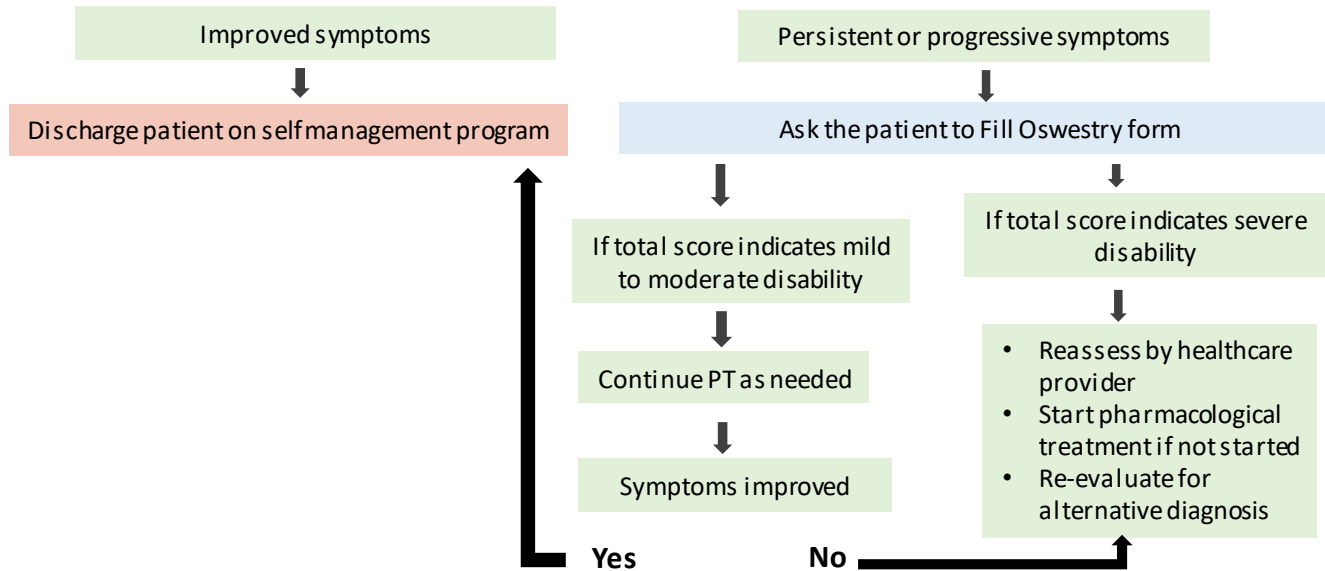
Proceed with appropriate laboratory testing, imaging
 And/ or Consultation with appropriate health care provider



Start patient on physical therapy (6 sessions)



Reassess the patient symptoms by Physiotherapist



Oswestry questionnaire form:

https://www.rehab.msu.edu/files/docs/Oswestry_Low_Back_Disability.pdf

Important points

- The exercise program must be designed based on the physical therapy assessment and to fit the patient's needs or goals.
- Develop a goal setting care plan based on need, evidence for effectiveness and patient preferences.
- Avoid recommendations that encourage the patient to remain passive and recommend a physically active lifestyle.
- Prescribe a graded activities program.
- Educate individual on disease etiology, risk factors, persistent pain and prognosis
- Symptom severity should guide appropriate management.
- Encourage individual to take an active role in the management of their condition
- Establish treatment goals and monitor periodically to maximize adherence and behavioral changes

Therapeutic process level of evidence

- Aerobic exercise:

Aerobic exercise most commonly a progressive walking program targeting either time or distance, are strongly recommended for chronic LBP (A).

- Strengthening exercise:

Strengthening exercises are Recommended (C), High Confidence for nearly all LBP patients other than those with acute LBP.

- Aquatic exercise:

Aquatic therapy is Recommended, Evidence (C) for selective patient chronic LBP (eg, extreme obesity, significant degenerative joint disease, etc).

- Spinal manipulation:

Spinal manipulation is one of many non-pharmacologic therapies to initially offer patients with chronic low back pain ([ACP Strong recommendation. Low-quality evidence](#))

- Motor control exercise

coordination/stabilization and motor control exercises may moderately reduce pain in adults with chronic low back pain (DynaMed Level2)

References

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- Toward Optimized Practice. Guideline for the evidence-informed primary care management of low back pain. Edmonton, AB: Toward Optimized Practice; 2011. Appendix A: Red and Yellow Flags.
- Busse J, Alexander PE, Abdul-Razzak A, Riva JJ, Alabousi M, Dufton J, et al. Appropriateness of spinal imaging use in Canada [Internet]. 2013 Apr 25.
- University Health Network, Health Quality Ontario, Ministry of Health and Long-Term Care. Low back pain imaging pathway. Developed as part of the Diagnostic Imaging Appropriateness (DI-APP) Tools in Primary Care. 2015.