# Non-invasive treatment interventions. Education, exercise, manual therapy.

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# Natural history

Most episodes improve within 6 weeks

2/3 still report some pain at 3 months and by 12 months average pain levels are low.

33% will have a reoccurrence within a year

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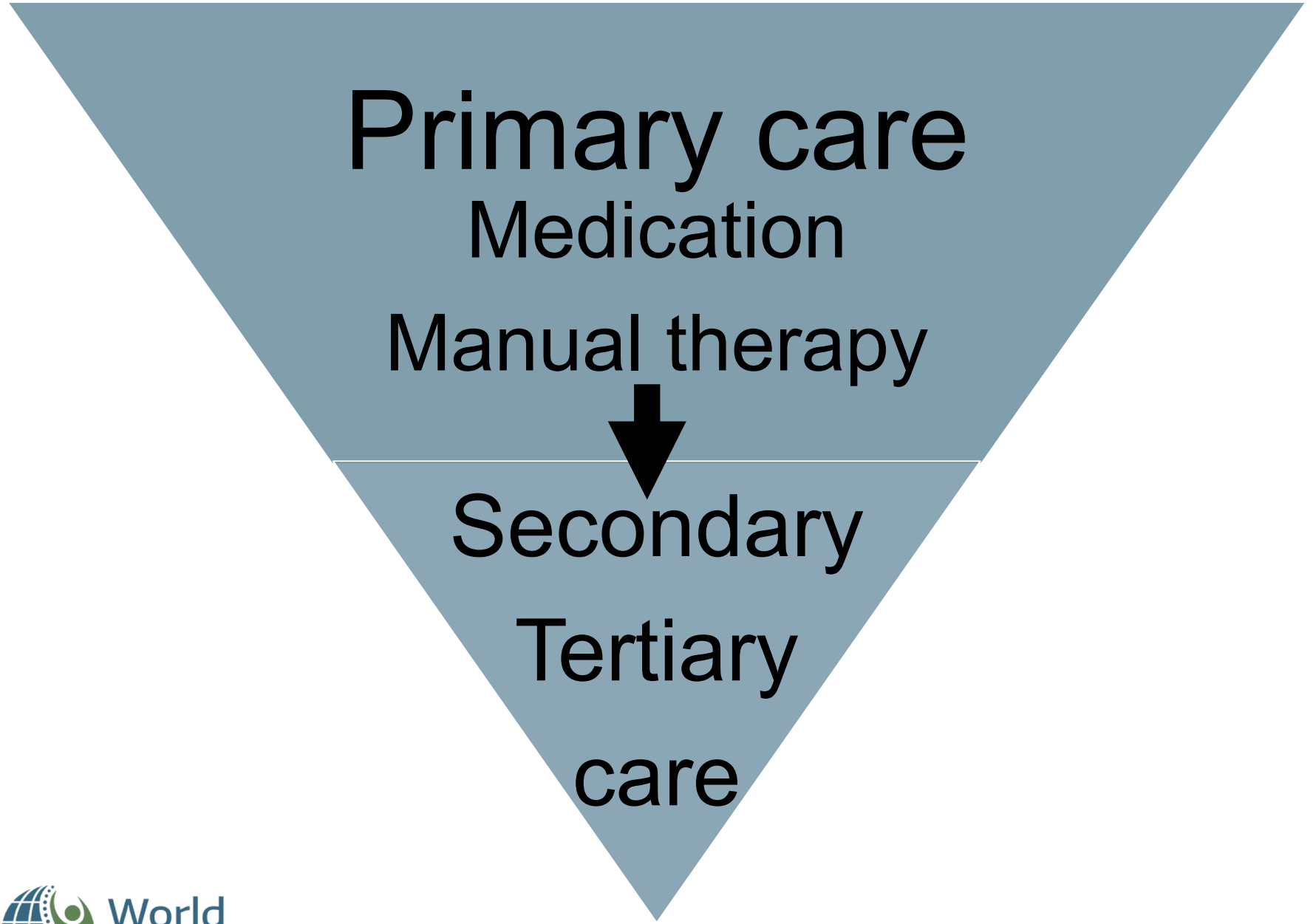


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# Iatrogenic risk factors

Communication by health care providers resulted in negative beliefs, including a belief that pain has an anatomical/structural cause and increased pessimism in future outlook.

These negative beliefs seemed to originate from interactions with health care practitioners and may be grounded in radiological findings. Furthermore, these beliefs seemed to be long lasting and resistant to change, thus suggesting that disabling LBP may be partly iatrogenic.

Also, Patients present with treatment expectations/beliefs that are not consistent with best practice

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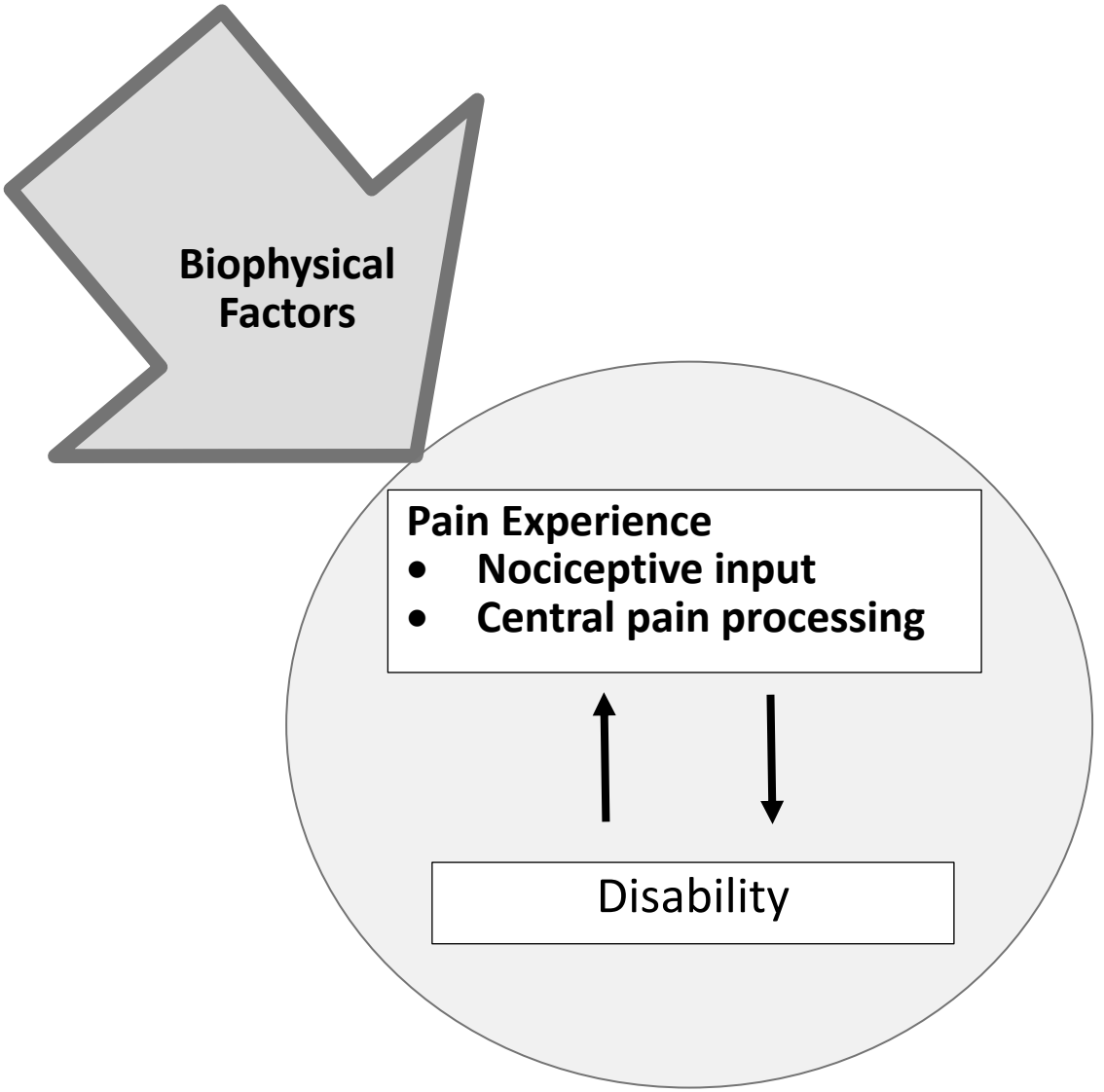
# Biomedical model

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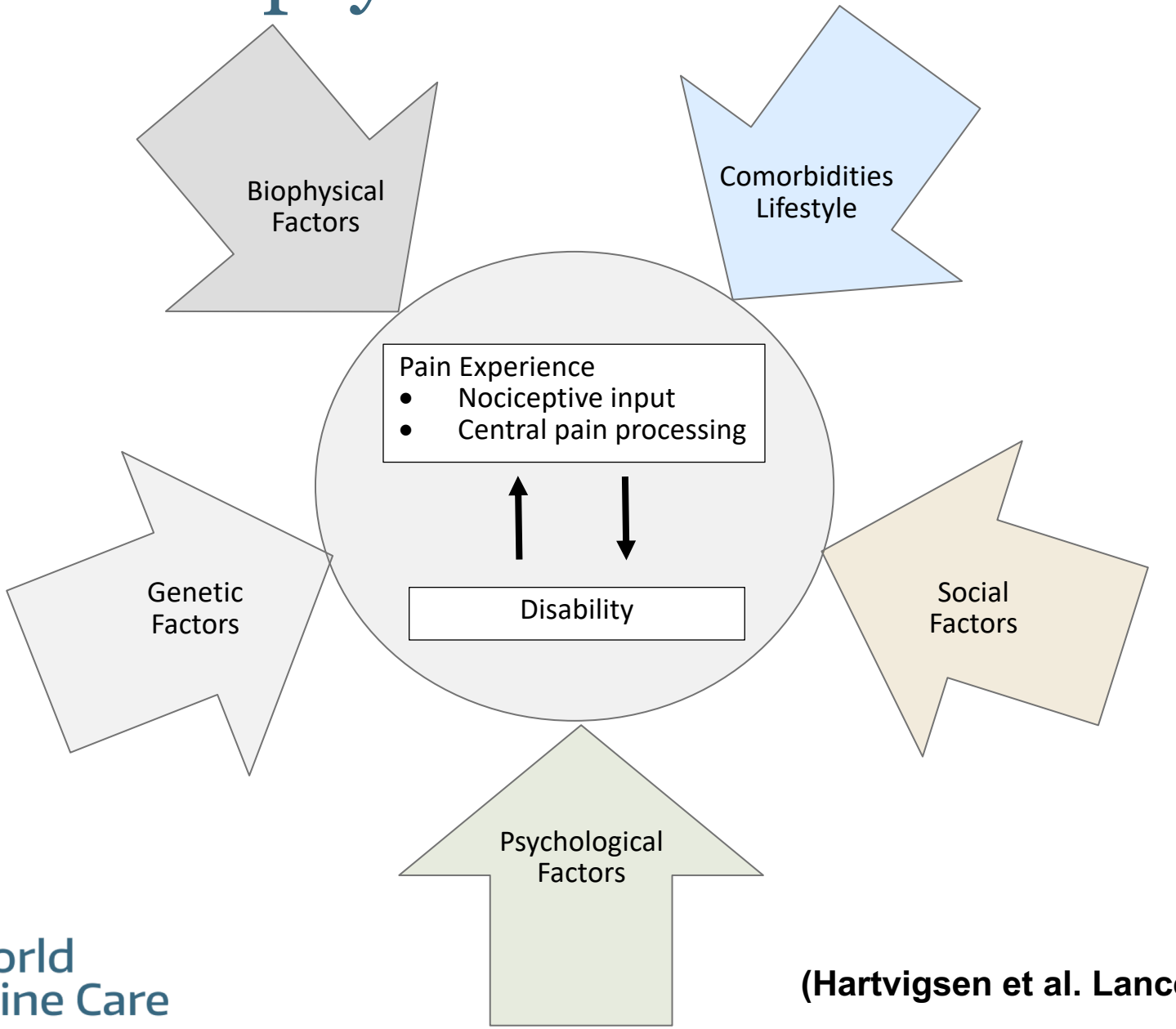
# Biopsychosocial model

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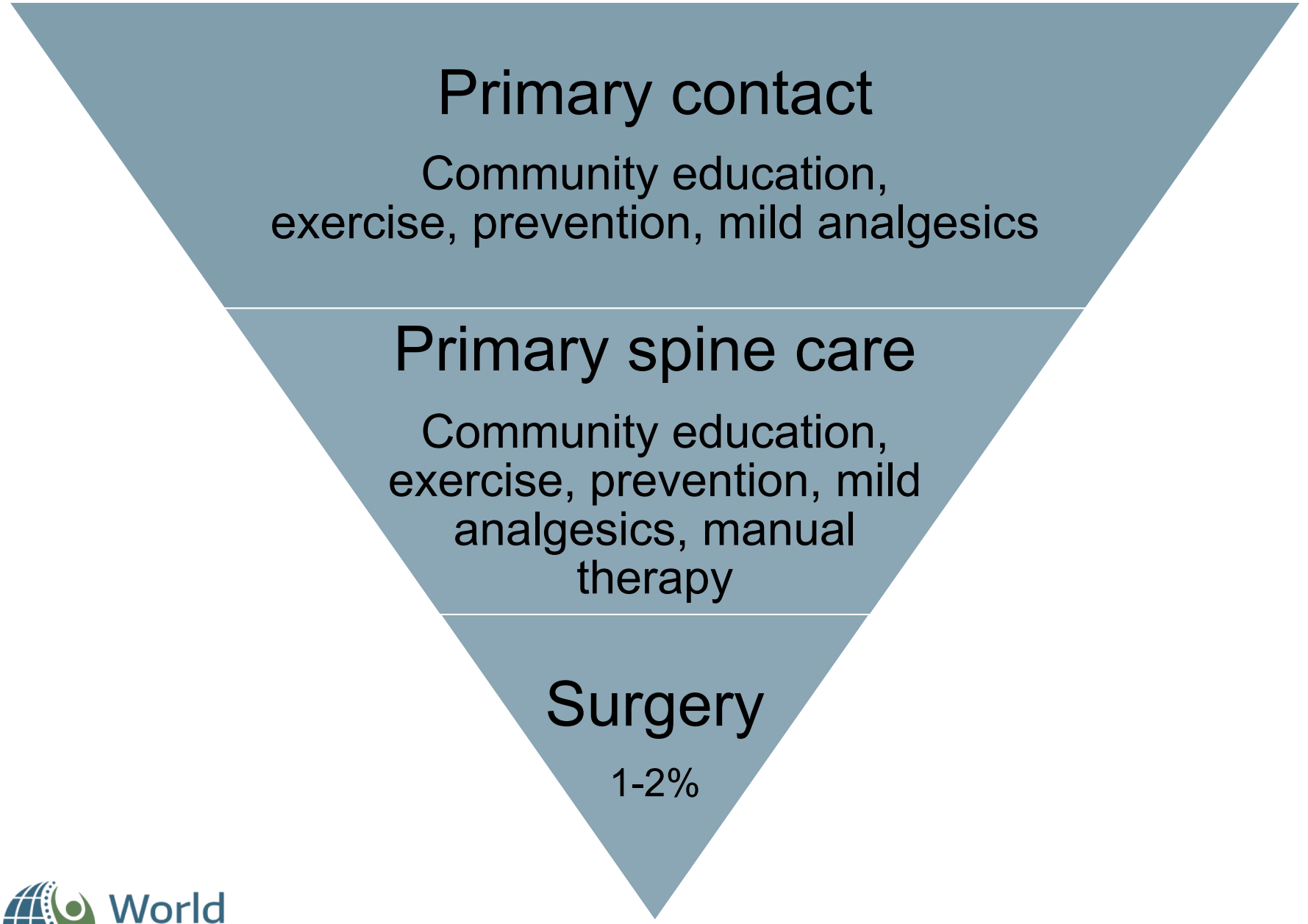
**(Hartvigsen et al. Lancet 2018)**

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# Psychosocial risk factors

- Depression, catastrophizing, anxiety, and stress,
- Beliefs and attitudes about back pain,
- Function, coping abilities, and
- Anticipation that passive treatments instead of active participation will help.

Psychological and social factors can act as barriers to recovery and their risks are increased when more than one is present

(Cedraschi, 2018)

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# Risk Factors and triggers for Low back pain

- Prior episodes of LBP
- Those with chronic conditions such as asthma, headache and diabetes are more likely to report LBP
- Smoking, obesity, low levels of activity
- Genetic component of chronic and disabling LBP
- Awkward postures, heavy manual tasks, feeling tired, being distracted during an activity

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# Barriers to recovery

- Belief that pain and activity are harmful
- “Sickness behaviour” such as extended rest.
- Low or negative mood, social withdrawal
- Treatment expectations that are not consistent with best practice
- Problems with claims or compensation
- History of back pain, time off or claims
- Problems at work, low job satisfaction
- Heavy work, unsociable hours (shift work)
- Overprotective family or lack of support

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# Treatment

**What can you do for your patient now?**

Reassurance, advice to stay active, early return to work

Education should take into account the general favorable natural history of acute spinal pain, with most patients experiencing substantial improvements in the first 4–6 weeks.

(Cedraschi, 2018)

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# Reassurance

- Show empathy and confidence,
- Recognize and address distress cues,
- Be warm and friendly,
- Include reassurance with explanation of symptoms and exclusion of serious disease if appropriate,
- Negotiate treatment options,
- Include goals, prognosis and treatment expectations,
- Discuss possible obstacles, and
- Ensure that the patient understands

(Cedraschi, 2018)

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# Key messaging

- Low back pain is a common condition and not a disease. It is best managed by reducing pain in order to increase function.
- Your examination today **does not demonstrate that there is any serious damage**, even though it may be very painful, recur and, and in some cases, become chronic. If your symptoms persist for > 6 weeks, schedule a follow-up appointment.
- **Imaging tests** like X-rays, CT scans and MRIs are not helpful for recovery or management of acute or recurring low back pain unless there are signs of serious damage.

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# Key messaging

- **Low back pain is often recurring** and recovery can happen without needing to see a healthcare provider. You can learn how to manage low back pain when it happens and use this information to help you recover next time.
- **You may need pain medication** to help you return to your daily activities and initiate exercise more comfortably. It is activity, however, and not the medication that will help you recover more quickly.
- If you are **feeling symptoms of sadness or anxiety**, this could be related to your condition and could impact your recovery.

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# Non-pharmacological Treatment

1. Exercise
2. Cognitive and Behavioural Therapies (CBT)
3. Manual Therapy
    - Spinal manipulation
    - Massage
    - Acupuncture
4. Yoga and Mindfulness-based relaxation

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# Active self care interventions

- Yoga, Tai Chi
- Mindfulness
- Aerobic exercise
- Specific exercise

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# Walking for overall health

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# Neck exercises

### 1. Flexion/extension

**Flexion:** Sitting upright in a good posture, bend your head forwards gently pulling your chin closer to your chest. Hold for a count of 5 then relax.

**Extension:** Sitting upright in a good posture, take your head slowly back until you are looking at the ceiling. Hold for a count of 5 then relax.

### 2. Rotation

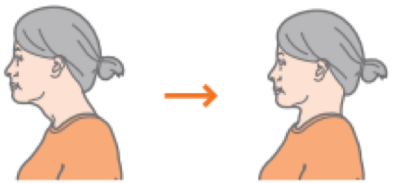
Sitting upright in a good posture, turn your head to one side until you feel a stretch. Hold for a count of 5 then relax. Repeat to the other side.

### 3. Side flexion

Sitting upright in a good posture, keep your head facing forward then tilt your head towards one shoulder, without shrugging your shoulder, until you feel the stretch on the opposite side. Hold for a count of 5 then relax. Repeat on the other side.

### 4. Retraction

Sitting upright in a good posture, pull your chin in (not tipping your head forwards). Hold at the end position and feel the stretch in your neck. Hold for a count of 5.



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# Low Back Exercises

## The "McGill Big Three" back exercises

*The three exercises that spine biomechanic Stuart McGill recommends to help people stabilize their spines:*


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Vox

# Exercises to AVOID

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# Manual therapies

- Spinal manipulation/mobilization
- Massage/soft tissue therapies
- Acupuncture

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# Pharmacological Therapies

**First line**

1. NSAIDs (short-term pain relief)
2. A short course of muscle relaxants

**Consider**

1. Anti-depressants
    - tricyclic antidepressants (TCAs)
    - serotonin–norepinephrine reuptake inhibitor (SNRIs)
2. Gabapentin, pregabalin, and duloxetine for radiculopathy (inconclusive)
3. Opioids (caution)

**(Chou, Nordin, Haldeman et. al)**

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# YELLOW FLAGS

**Depression, anxiety and stress**

- Over the past 2 weeks have you felt nervous, anxious, on the edge?
- Not been able to stop or control worrying?
- Felt down, depressed, or hopeless?
- Had little interest or pleasure in doing things?

**Function**

- Can you lift heavy weights without extra pain?
- Can you look after yourself normally without extra pain?
- Does pain prevent you from walking?
- How long can you sit without extra pain?
- How long can you stand without extra pain?

**Coping (catastrophizing, fear avoidance)**

- How do you control your symptoms what do you do to control them?
- How much have you been able to control (i.e., reduce/help) your symptoms on your own during the past week?
- Do you think your back pain will get better?
- Do you feel safe being physically active?

**Expectations**

- Do you think all necessary examinations have been made?
- According to you, what would be the best treatment for your pain?
- What do you expect from the treatment?

**Beliefs**

- Tell me about your back pain, how did it start?
- What do you understand is the cause of your back pain?

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