Effectiveness of Home Directional Preference Exercise/Stretch Program for Reducing Disability in Mechanical Chronic Low Back Pain in a Residency Clinic, a Quality Improvement Project

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Introduction

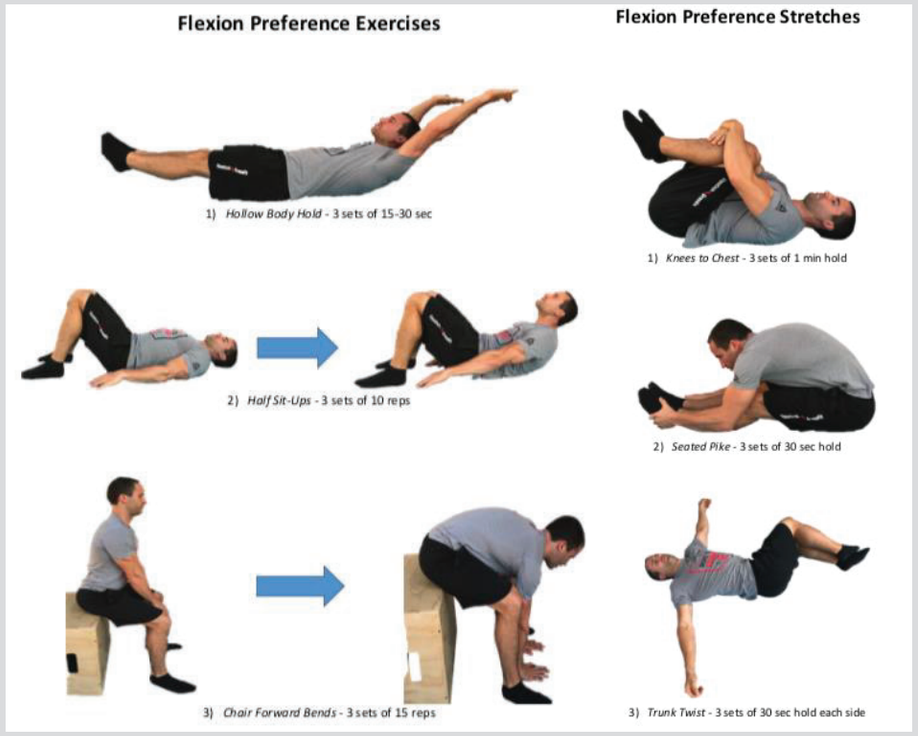
Chronic low back pain (CLBP)

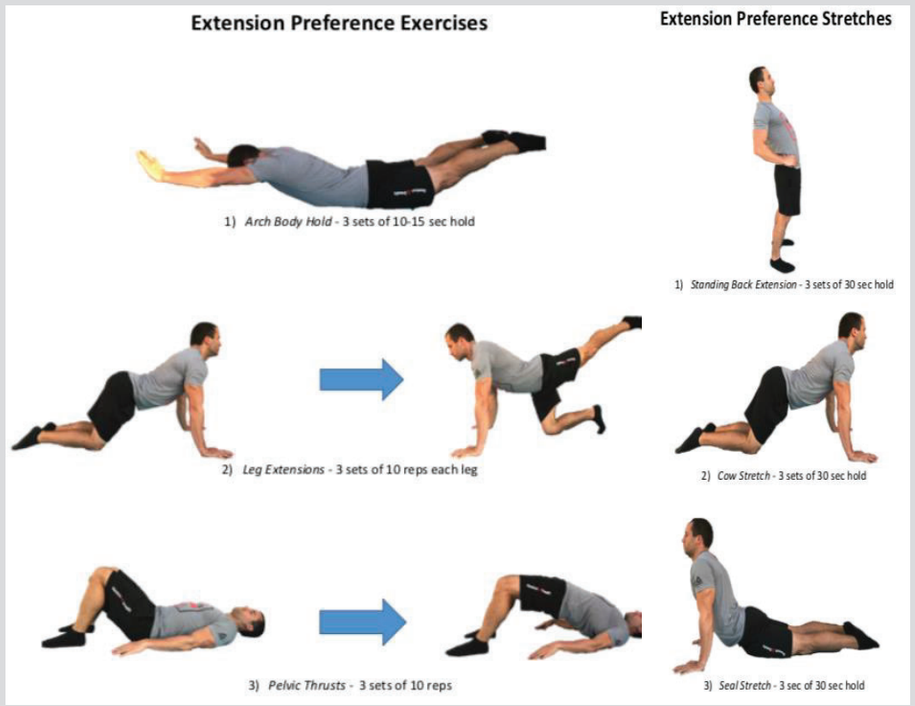
- Lasts for at least 12 weeks
- Leading cause of disability and loss of productivity in the United States
- Exercise is most effective for improving symptoms
- Conflicting evidence about what specific type of exercise is best
- Some studies demonstrate improvement with supervised directional preference exercise routines
- Objective is to determine effectiveness of a home directional preference exercise/stretch program for reducing disability

Methods

- Patient screened at routine clinic visit and considered eligible if they had known diagnosis of CLBP
- Excluded if in an acute exacerbation
- Patient categorized by directional range of motion preference based on physical exam, either flexion or extension, whichever improved pain most
- Given simple routine with pictures demonstrating 3 exercises and stretches that emphasized directional preference
- Degree of disability score was measured at initial visit by completing Oswestry Disability Index (ODI)
- ODI score reassessed at follow-up assessment 4-8 weeks later with five follow-up questions regarding compliance and acute exacerbation
- Excluded if in acute exacerbation on follow up assessment

Directional Preference Programs





Results

- 12 total patients enrolled: 7 lost to follow up, 5 completed study at proper follow up interval; however, 1 in acute exacerbation so was excluded
- 4 patients included: 2 had extension, 2 had flexion preference
- 3 out of 4 patients had decreased disability scores at follow up
- Total post-intervention score on ODI improved by an average of 10 points compared to pre-intervention score for patients who improved
- Most improved post-interventional score categories: walking and changing degree of pain

Conclusions

- 75% of patients who completed study had improvement in ODI
- Due to small sample size and study power, results not statistically significant
- Conclusion cannot be appropriately drawn
- Results promising and deserve further investigation with larger sample size.

Limitations

- Small sample size due to:
  - Patients not following up with same provider
  - Multiple providers unaware of study and how to enroll
  - Poor screening of eligible patients at routine visits
  - Inconvenience and burdensomeness of enrolling patients
  - Short duration of study period
  - Failure to schedule follow-up visit
  - Failure to show at follow-up visit
- No control group

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