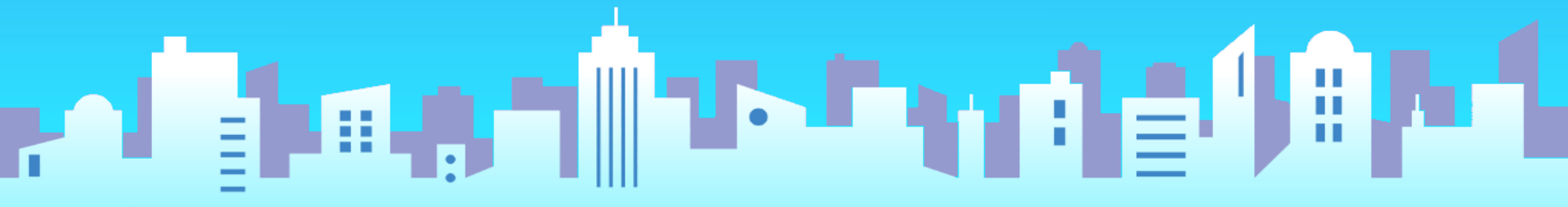
Activities of Daily Living

(ADL)



What are ADLs and how are they used in Healthcare?

Definition...

Activities of daily living (ADLs or ADL) is a term used in healthcare to refer to people's **daily** self care **activities**. Common ADLs include feeding ourselves, bathing, dressing, grooming, work, homemaking, ambulation, cleaning oneself after defecating and leisure.

Basic ADLs

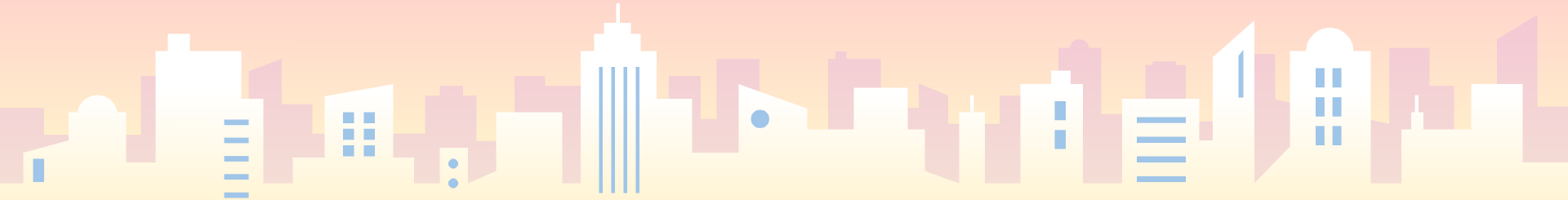
Consist of self care task.

Instrumental ADLs

Not fundamental but allows an individual to live independently in a community.

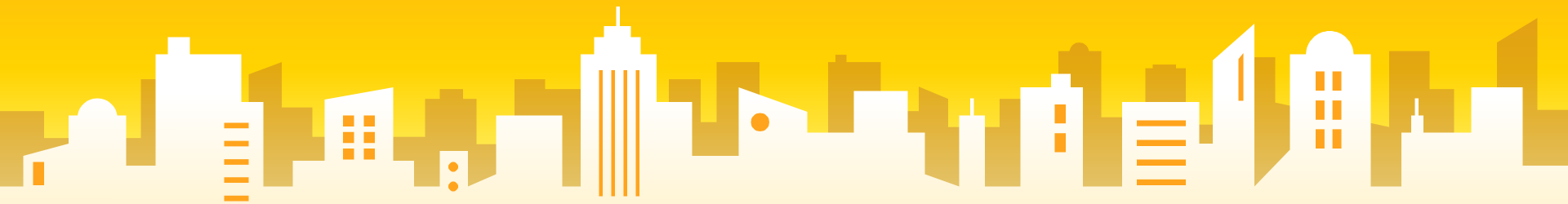
- Shopping, Playing, etc.

ADL is a standard metric used to quantify a person quality of life often after experiences a medical procedure. The goal is to find better ways to score a person's performance to more accurately evaluate their outcome! Focusing on keeping people independent.



DARI has the ability to quantify function like never before for ADLs!

Let's demonstrate the capabilities and applications



DARI capabilities.

Utilizing the DARI database we are able to find how different data points inside movements statistically compare to age. Now, we have a focused data approach to better understand expectations for ADL with a precise measurement tool.

Past Research.

Multi studies have been done utilizing motion capture data to give us an initial understanding of patient expectations. We can utilize their learnings and apply it to our reporting logic.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4690598/

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5537477/

In healthcare this style of testing is being used more regularly and has more research coming out over the last 3 years supporting it as a strategy to document patient outcomes.

What are the next steps to communicate ADL through DARI?

Data Science.

DARI's statistical approach will allow us to rate a movement based on "what" the person did (performance-based outcome).

Additionally, we will be able to supplement the scoring with attributes of "how" they movement. (vulnerability).

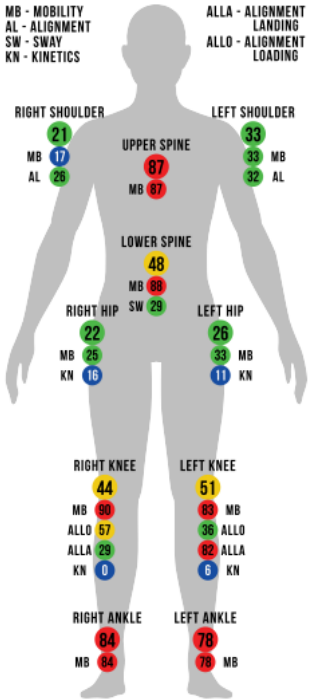
ADL Research.

After reviewing the movements currently done for a standard ADL you quickly notice that subjective approval metrics are used widely for different task. DARI will work to transform those movements to remove subjective judgements.
Example – what squat depth is needed to get functionally get off a toilet?

Feedback.

Each ADL is complemented with a standard questionnaire. This information easily collected and continually applied to our data science approach to further the insight extrapolation.

Visualization of an ADL protocol through DARI

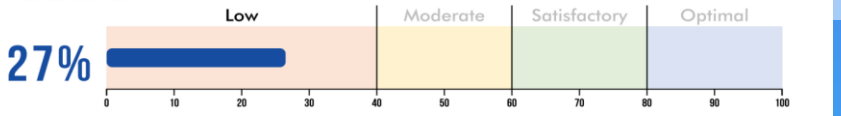


MOVEMENTS PERFORMED

Shoulder Abduction
Shoulder Horizontal Abduction
Shoulder Internal/External Rotation
Shoulder Flexion/Extension
Forward Fold
Trunk Lateral Flexion Right
Trunk Lateral Flexion Left
Trunk Rotation
Reverse Lunge with Rotation Right
Reverse Lunge with Rotation Left
Standing Hip Abduction Right
Standing Hip Abduction Left
Bodyweight Squat
Unilateral Squat Right
Unilateral Squat Left
Forward Lunge Right
Forward Lunge Left
Lateral Lunge Right
Lateral Lunge Left
Tandem Balance
Stork Balance Right
Stork Balance Left
Vertical Jump
Unilateral Vertical Jump Right
Unilateral Vertical Jump Left
Step Down Left - Right Stance*
Step Down Right - Left Stance*
Scaling Poses

* Movement does not contribute to joint scoring

OVERALL READINESS



STATUS: LOW

Your Overall Readiness was in the low functionality zone. This means your body performance and quality of movement were below average. Work to improve your movement foundation by focusing on how you perform movements. Begin by addressing the personalized focus and priority areas below to close the gap and improve your readiness!

FOCUS & PRIORITY

1 RIGHT KNEE MOBILITY

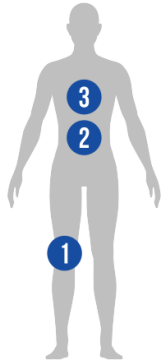
Your right knee had limited flexion (bending) during squats and/or lunges. Knee flexion allows for you to properly load into the hips and ankles. This helps you activate the largest, most powerful muscle in your body, the glute max.

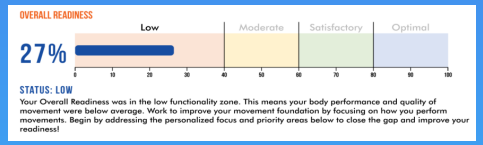
2 LOW BACK MOBILITY

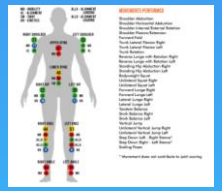
Your lower back mobility was below the desired ranges during your trunk movement(s). This pattern can limit daily activities. Improving mobility will decrease injury risk to this area.

3 MID-BACK MOBILITY

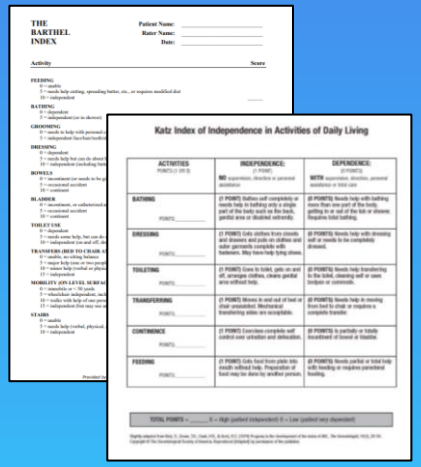
Your upper back mobility was below the desired ranges during your trunk movement(s). This pattern can limit daily activities. Improving mobility will decrease injury risk to this area.







Impact Decisions



Document Outcomes

Combination of Objective + Subjective = Full Experience

driving next version insights

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