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A study to understand the early stages of muscle weakness in people with Dysferlinopathy (a type of limb girdle muscular dystrophy)

Submission date
16/10/2025

Recruitment status
Recruiting

Registration date
27/10/2025

Overall study status
Ongoing

Last Edited
13/11/2025

Condition category
Musculoskeletal Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Limb Girdle Muscular Dystrophy R2 (LGMDR2), also called Dysferlinopathy, is a rare inherited condition that causes muscles to become weaker over time. It usually starts in the teenage years or early adulthood, but some people find out they have it through genetic testing before they feel any symptoms. Scientists still don't know much about what happens in the very early stages of the disease. This study aims to learn more about those early changes in the body to help improve diagnosis and treatment in the future.

Who can participate?
People who have been diagnosed with changes in the DYSF gene (linked to Dysferlinopathy) and who either have no symptoms or only very mild symptoms may be invited to take part.

What does the study involve?
Participants will visit the research centre once a year for up to five years. Each visit will include:
-A physical check-up and tests of muscle strength and movement
-A walking assessment
-MRI scans to look at muscles
-Questionnaires about daily activity, tiredness, pain, and quality of life
-Blood and urine samples for lab tests
-Participants can also choose to give extra samples (like blood, skin, or muscle) for future research.

What are the possible benefits and risks of participating?
There is no direct benefit to participants, but the study will help doctors understand how the disease starts and changes over time. This could lead to better care and new treatments in the future. The risks are low and mostly related to standard medical procedures like blood tests or MRI scans.

Where is the study run from?
Newcastle upon Tyne Hospitals NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
April 2024 to December 2031

Who is funding the study?
Jain Foundation (USA)

Who is the main contact?
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Contact information

Type(s)
Scientific, Principal investigator

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Additional identifiers

Integrated Research Application System (IRAS)
342633

Protocol serial number
Protocol Number: 10966 v1.1

Study information

Scientific Title
COS-PREPARED: Clinical Outcome Study in PRe- and Early-symptomatic PAtients with REcessive Dysferlinopathy

Acronym
COS-PREPARED

Study objectives
Primary objectives:
1. To describe and quantify the early natural history of Dysferlinopathy, including changes in muscle function, strength, and pathology, using physiotherapy assessments, gait analysis, and MRI measures.
2. To determine the most suitable and robust outcomes measures for evaluation of disease progression in patients with dysferlinopathy at early stages of the disease

Secondary objectives:
1. To gain a greater understanding of symptom onset and muscle pathology at early disease stages for this patient population to inform earlier diagnosis.
2. To test current outcome measures sensitivity and suitability for assessing patients in the initial stages of symptom onset

Ethics approval required
Ethics approval required

Ethics approval(s)
approved 19/04/2024, North East - Newcastle & North Tyneside 1 Research Ethics Committee (2nd Floor, 2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; +44 207 104 8384; newcastlenorthtyneside1.rec@hra.nhs.uk), ref: 24/NE/0066

Study design
Prospective observational longitudinal study

Primary study design
Observational

Study type(s)

Other

Health condition(s) or problem(s) studied
Limb Girdle Muscular Dystrophy R2 (LGMDR2, Dysferlinopathy)

Interventions
Participants will visit the research centre once a year for up to five years. Each visit will include:
-Physical Examination
-Respiratory Assessment
-Vital Signs
-Functional Assessments
-Care Discussion- access to current care
-Strength Tests Dynamometry- pinch grip and hip adduction
-Gait Assessment
-Blood Draw
-MRI Scan- 3 point Dixon, T2w mapping and Sodium MRI
-Optional Biobanking- blood, urine, skin for fibroblast, muscle
-Medical History

Intervention Type
Other

Primary outcome(s)
Muscle strength, function, and pathology measured using North Star Assessment for Limb Girdle Muscular Dystrophies (NSAD), timed functional tests (e.g., 100-metre walk/run), handheld dynamometry, and quantitative muscle MRI
(3-point Dixon fat fraction and T2 mapping) at baseline and annually for up to 5 years

Key secondary outcome(s))
1. Gait parameters (velocity, step length, symmetry, and muscle activation) measured using instrumented gait analysis with motion capture and surface electromyography at baseline and annually for up to 5 years
2. Activity limitation and participation measured using ACTIVLIM questionnaire at baseline and annually for up to 5 years
3. Fatigue and pain levels measured using Fatigue Severity Scale (FSS), PROMIS Fatigue, and Short-Form McGill Pain
Questionnaire (SF-MPQ) at baseline and annually for up to 5 years
4. Respiratory function measured using Forced Vital Capacity (FVC) and FEV_1 in sitting and lying positions at baseline and annually for up to 5 years

Completion date
31/12/2031

Eligibility

Key inclusion criteria
1. Genetically confirmed recessive Dysferlinopathy (LGMDR2), proven by two pathogenic or likely pathogenic variants in the DYSF gene
2. Pre-symptomatic or early-symptomatic individuals (able to stand on tiptoes on both feet and

hop with foot clearance)
3. Able to perform all study assessments including muscle MRI and gait analysis
4. Able to attend scheduled annual visits and follow study procedures

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
4 years

Upper age limit
65 years

Sex
All

Total final enrolment
0

Key exclusion criteria
1. Current or planned medical or other interventions that could interfere with study assessments
2. Presence of another condition that could affect participation or study results, as judged by the investigator
3. Participation in a clinical trial that could alter the natural course of the disease

Date of first enrolment
07/07/2025

Date of final enrolment
31/12/2029

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
The Newcastle upon Tyne Hospitals NHS Foundation Trust
Freeman Hospital
Freeman Road
High Heaton

Newcastle upon Tyne
England
NE7 7DN

Sponsor information

Organisation
Newcastle upon Tyne Hospitals NHS Foundation Trust

ROR
https://ror.org/05p40t847

Funder(s)

Funder type
Charity

Funder Name
Jain Foundation

Alternative Name(s)
Jain Foundation Inc., The Jain Foundation, JFI, JF

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan
De-identified individual participant data, including clinical, physiotherapy, gait, MRI, patient-reported outcomes and biomarker results, will be available upon reasonable request from Heather Hilsden (Project Manager, JWMDRC, Newcastle University; heather.hilsden@newcastle.ac.uk or info@jwmdrc.org). Data will be stored in a secure non-public institutional repository at the John Walton Muscular Dystrophy Research Centre in collaboration with the Jain Foundation. Access will be granted after study completion and publication of the main results (expected from December 2030), subject to Steering Committee approval and a data-use agreement.

Academic and non-commercial researchers may access de-identified datasets free of charge; commercial users may be asked to cover administrative costs. Data will remain available for at least 10 years post-publication and will comply with GDPR and UK Data Protection Act (2018) standards. Participants provide informed consent for anonymised data sharing for ethically approved research.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes