Untitled

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# Glucose ingestion before and after resistance training does not augment ribosome biogenesis in young moderately trained adults

## Disadvantages due to Covid-19

Due to restrictions regarding social distancing and lock downs caused by the Covid-19 pandemic, we were not able to recruit and include as many participants as we planned to the study. The pandemic was also a contributing factor to the endocrine analysis not being completed, as they were supposed to be performed at Sykehuset Innlandet Hospital Trust.

## Methods

This data set is a part of a larger project involving several investigators and other outcomes not covered here. All participants were informed about the potential discomforts and risks associated with the study and gave their informed consent prior to study enrollment. The project was approved by the regional ethical committee (REK, ID nr. 153628), pre registered at clinicaltrials.gov (Identifier: NCT04545190) and conducted according to the Helsinki declaration

### Participants

Sixteen male and female participants (20-33yrs, Tab 1) were recruited to the study through facebook advertisement and word of mouth and taken through the selection process (Fig 1). The eligibility criteria were non-smokers and moderately trained (i.e. 2-8 resistance training sessions per 14 days for the last six months). Exclusion criteria were previous injury leading to impaired strength, inability to perform resistance training and symptoms, and a medical record of metabolic disorders including hyperglycemia, i.e. fasting venous plasma glucose ≥6.1 mmol/L and/or 2-hour glucose tolerance ≥7.8 mmol/L, and/or HbA1c >42 mmol/mol. Our goal was to recruit 20 participants to the study, however due to the advents of Covid-19, we were not able to do so. Sixteen participants commenced the intervention, during which three dropped out. One participant had a sick child, and was unable to resume the intervention, two participants experienced muscular discomfort connected to heavy resistance training (Fig 1). Baseline characteristics (Tab 1) were measured by means of DXA (Prodigy Advance PA+302047, Lunar, San Francisco, CA, USA) at Day -1, the last day preceding the RT intervention.

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| --- | --- | --- |
| Variable | Female (n=7) | Male (n=9) |
| Age (yrs) | 24.6 (4.8) | 23.7 (1.8) |
| BMI | 23.2 (1.4) | 25.2 (2.5) |
| Fat mass (kg) | 17 (5.7) | 14.9 (6.1) |
| Fat free mass (kg) | 52.2 (6.8) | 64.4 (4.6) |
| Height (cm) | 172.1 (5.8) | 176.7 (5) |
| Lean body mass (kg) | 49.5 (6.5) | 61.1 (4.5) |
| Body weight (kg) | 68.5 (3.5) | 78.4 (6.1) |

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