Supplementary table 2. World Health Organization Trial Registration Data Set (Version 1.3.1)

Item Nr.	Description
1.	**Primary Registry and Trial Identifying Number** ClinicalTrials.gov Identifier NCT04991337
2.	**Date of Registration in Primary Registry** 5 August 2021
3.	**Secondary Identifying Numbers** Vestre Viken Hospital Trust Data Protection Officer reference 21/05277-1
4.	**Source(s) of Monetary or Material Support** The study is funded by The Norwegian Health Association and Vestre Viken Hospital Trust, Norway.
5.	**Primary Sponsor** Bærum sykehus, Vestre Viken Hospital Trust
6.	**Secondary Sponsor(s)** N/A
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9.	**Public Title** Effects of Detraining in Endurance Athletes with Atrial Fibrillation (The NEXAF Detraining study). An international multicentre randomized controlled trial
10.	**Scientific Title** Effects of Detraining in Endurance Athletes with Atrial Fibrillation (The NEXAF Detraining study). An international multicentre randomized controlled trial
11.	**Countries of Recruitment** Australia, Belgium, Norway
12.	**Health conditions studied** Atrial fibrillation
13.	**Intervention (s)** Detraining (tailored training adaption) group: Will be instructed to avoid high-intensity exercise corresponding to a heart rate >75% of maximum heart rate (HR), and a total duration of exercise (hours/week) corresponding to >80% of the self-reported average weekly amount of exercise (hours/week) during the past six months, for a period of 16 week. Control group: Will be instructed to perform at least three weekly sessions of high intensity exercise, corresponding to a HR ≥85% of maximum heart rate, and otherwise continue endurance exercise as usual.
14.	**Key Inclusion and Exclusion Criteria** Inclusion Criteria: Signed informed consent Age ≥ 18 years Diagnosed with paroxysmal atrial fibrillation (verified by electrocardiogram) Report >5 (running, rowing) or >8 (cycling, cross-country skiing), weekly hours, respectively, of endurance sport

	At least two anamnestic (self-reported) episodes of atrial fibrillation, of which one during the last six months Use a smartphone and agree to connect their sportswatch with a web-based platform for monitoring of exercise Exclusion Criteria: Permanent atrial fibrillation Cardiac conditions (including valvular heart disease of moderate or greater severity, symptomatic ischemic heart disease) Left ventricular ejection fraction <45% Hypertension (>140/90) Diabetes mellitus Hyperthyroidism Smoking during the last 5 years Alcohol intake >20 alcohol units/week Use of illegal or performance enhancing drugs Body mass index >30kg/m2 Injuries preventing physical exercise Pregnancy Participation in conflicting intervention research studies Planned atrial fibrillation ablation within the next six months The individual refuses to have an insertable cardiac monitor, blood samples taken or be part of the detraining group
15.	**Study type** Randomized controlled trial
16.	**Date of First Enrollment** 5 Januar 2022
17.	**Sample size** 120
18.	**Recruitment status** Recruiting: participants are currently being recruited and enrolled
19.	**19. Primary Outcome(s)** Outcome Name: Atrial fibrillation burden Metric/method of measurement: Atrial fibrillation burden (time with atrial fibrillation) as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring and reported as percentages. Timepoint: Measured during the last 4 weeks (week 13-16) of the 16-week intervention period
20.	**20. Key Secondary Outcomes** Outcome Name: Atrial fibrillation burden

	Metric/method of measurement: Atrial fibrillation burden (time with atrial fibrillation) as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring and reported as percentages. Timepoint: Measured during the first 4 weeks (week 1-4) of the 16-week intervention period Outcome Name: Atrial fibrillation burden Metric/method of measurement: Atrial fibrillation burden (time with atrial fibrillation) as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring and reported as percentages. Timepoint: Measured during week 5-8 of the 16-week intervention period Outcome Name: Atrial fibrillation burden Metric/method of measurement: Atrial fibrillation burden (time with atrial fibrillation) as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring and reported as percentages. Timepoint: Measured during week 9-12 of the 16-week intervention period Outcome Name: Atrial fibrillation burden Metric/method of measurement: Atrial fibrillation burden (time with atrial fibrillation) as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring and reported as percentages. Timepoint: Measured during week 13-16 of the 16-week intervention period Outcome Name: Cumulative atrial fibrillation burden Metric/method of measurement: Atrial fibrillation burden (time with atrial fibrillation) as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring and reported as percentages. Timepoint: Measured during the entire 16-week intervention period Outcome Name: Atrial fibrillation episode duration Metric/method of measurement: Mean duration of atrial fibrillation episodes lasting ≥30sec Timepoint: Measured during the 16-week intervention period Outcome Name: Atrial fibrillation episodes Metric/method of measurement: Number of atrial fibrillation episodes lasting ≥30sec, as measured by insertable cardiac monitor Timepoint: Measured during the first 4 weeks (week 1-4) of the 16-week intervention period Outcome Name: Atrial fibrillation episodes

	Metric/method of measurement: Number of atrial fibrillation episodes lasting ≥30sec, as measured by insertable cardiac monitor Timepoint: Measured during week 5-8 of the 16-week intervention period Outcome Name: Atrial fibrillation episodes Metric/method of measurement: Number of atrial fibrillation episodes lasting ≥30sec, as measured by insertable cardiac monitor Timepoint: Measured during week 9-12 of the 16-week intervention period Outcome Name: Atrial fibrillation episodes Metric/method of measurement: Number of atrial fibrillation episodes lasting ≥30sec, as measured by insertable cardiac monitor Timepoint: Measured during week 13-16 of the 16-week intervention period Outcome Name: Cumulative atrial fibrillation episodes Metric/method of measurement: Number of atrial fibrillation episodes lasting ≥30sec, as measured by insertable cardiac monitor Timepoint: Measured during the 16-week intervention period Outcome Name: Days with atrial fibrillation Metric/method of measurement: Days with at least one episode of atrial fibrillation lasting ≥30sec Timepoint: Measured during the 16-week intervention period Outcome Name: Days without atrial fibrillation Metric/method of measurement: Days without at least one episode of atrial fibrillation lasting ≥30sec Timepoint: Measured during the 16-week intervention period Outcome Name: Relative change in atrial fibrillation burden Metric/method of measurement: Relative change in atrial fibrillation burden as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring Timepoint: Measured during the 4-week baseline period prior to randomization and during the last 4 weeks of the 16-week intervention period Outcome Name: Relative change in atrial fibrillation burden Metric/method of measurement: Relative change in atrial fibrillation burden as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring Timepoint: Measured during the 4-week baseline period prior to randomization and during the first 4 weeks of the 16-week intervention period Outcome Name: Relative change in atrial fibrillation burden

	Metric/method of measurement: Relative change in atrial fibrillation burden as measured by continuous monitoring with insertable cardiac monitor and calculated as the cumulative duration of all atrial fibrillation episodes lasting ≥30sec divided by total duration of monitoring Timepoint: Measured during the 4-week baseline period prior to randomization and during the entire 16-week intervention period Outcome Name: Adherence to prescribed exercise Metric/method of measurement: Adherence to prescribed exercise (>80% of exercise with ≥85% and ≤75% of maximum heart rate, respectively) registered with sports watches Timepoint: 16 weeks Outcome Name: Exercise capacity Metric/method of measurement: Peak oxygen uptake (VO2peak) measured during cardiopulmonary exercise testing Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Atrial volumes Metric/method of measurement: Right and left atrial volumes measured with echocardiography Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Ventricular volumes Metric/method of measurement: Right and left ventricular volumes measured with echocardiography Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Atrial function Metric/method of measurement: Right and left atrial function measured with strain during echocardiography Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Ventricular function Metric/method of measurement: Right and left ventricular function measured with strain during echocardiography Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Ventricular systolic function Metric/method of measurement: Right and left ventricular ejection fraction measured with strain during echocardiography Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period

	Outcome Name: Atrial fibrillation symptoms Metric/method of measurement: Self-reported number of symptomatic atrial fibrillation episodes by questionnaire Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Atrial Fibrillation Effect on QualiTy-of-life Metric/method of measurement: Measured with the Atrial Fibrillation Effect on QualiTy-of-life questionnaire (AFEQT). Minimum score 0, maximum score 100, higher values indicate better quality of life Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Atrial fibrillation hospitalizations Metric/method of measurement: Number of unplanned hospitalizations due to atrial fibrillation cardioversion or ablation Timepoint: Throughout study completion, an average of 22 weeks Outcome Name: Modified European Heart Rhythm Association Symptom Scale (mEHRA) symptom classification Metric/method of measurement: Modified European Heart Rhythm Association Symptom Scale (mEHRA) questionnaire. The scale ranges from minimum 1 to maxiumum 4, a higher score indicates a worse symptom burden Timepoint: Measured at the baseline study visit and at the final study visit after the 16-week intervention period Outcome Name: Number of ventricular arrhythmias Metric/method of measurement: Ventricular arrhythmias lasting ≥12 ventricular complexes as measured by continuous monitoring with insertable cardiac monitor Timepoint: Throughout study completion, an average of 22 weeks Outcome Name: Number of adverse events Metric/method of measurement: Any unfavorable and unintended sign, symptom or illness that develops or worsens during the trial period will be reported as adverse events (AE). A serious adverse event (SAE) is defined as death, any life-threatening event or any inpatient hospitalization Timepoint: Throughout study completion, an average of 22 weeks Outcome Name: Cardiovascular risk factors measured by blood pressure Metric/method of measurement: Measure of blood pressure (mmHg) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Cardiovascular risk factors measured by blood lipids Metric/method of measurement: Blood lipids (mmol/L) Timepoint: Measured at baseline and after the 16-week intervention period

	Outcome Name: Cardiovascular risk factors measured by body weight Metric/method of measurement: Weight (kg) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Cardiovascular risk factors measured by body mass index (BMI) Metric/method of measurement: BMI (weight and height will be combined to report BMI in kg/m^2) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Cardiovascular risk factors measured by smoking Metric/method of measurement: Self-reported smoking (pack years) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Cardiovascular risk factors measured by alcohol use Metric/method of measurement: Self-reported alcohol use (units) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Cardiovascular biomarkers - inflammation markers Metric/method of measurement: Markers for inflammation markers; interleukines and hrCRP (mg/L) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Cardiovascular biomarkers - markers for myocardial damage Metric/method of measurement: Markers for myocardial damage, measured by troponin T (ng/L) and NT-ProBNP (ng/L) Timepoint: Measured at baseline and after the 16-week intervention period Outcome Name: Immediate effects on arrhythmia burden of high-intensity exercise Metric/method of measurement: Arrhythmias measured with 24-hour electrocardiogram after peak cardiopulmonary exercise testing Timepoint: 24 hours after after peak exercise testing Outcome Name: Immediate effects on biomarkers of exercise Metric/method of measurement: Blood sampling at peak exercise for analyses of cardiac Troponins, NT-pro-BNP, interleukins, C-reactive protein Timepoint: At peak exercise during cardiopulmonary exercise testing
21.	**Ethics Review** Approved 29 April 2021 by The Regional Committee for Health Research Ethics, Oslo, Norway (REK sør-øst A/212748) Approved 1 September 2020 by The Alfred Hospital Ethics Committee, Melbourne, Australia (HREC/76210/Alfred-2021) Approved 13 October 2022 by The Ethics Committee Research KU/UZ Leuven, Leuven, Belgium (S65930)

22.	**Completion date** N/A
23.	**Summary Results** N/A
24.	**IPD sharing statement** Data sharing between the participating institutions is regulated by Study agreements between The Sponsor and each participating center.