**Retrospective Data Request**

**Feasibility Assessment Form**

**LSAH/LSDA**

The information provided on this form will be used to evaluate the feasibility of Lifetime Surveillance of Astronaut Health (LSAH) or Life Sciences Data Archive (LSDA) providing data for your project in a timely manner.

Please use the Retrospective Data Request Information Package in order to guide the use of this form.

**Principal Investigator:**

**Investigation Title:**

**Investigation Objective (300 words or less):**

**Study Duration:**

**Data Needed:**

🞏 Archived Research Data

For more information see: <https://lsda.jsc.nasa.gov/lsda_home1.aspx>

🞏 Archived Medical Data

For more information see: <https://lsda.jsc.nasa.gov/lsah_home1.aspx>

**Retrospective research subjects:**

Will you be requesting data on astronauts?

Will you be requesting data on Longitudinal Study of Astronaut Health Comparison group?

Will you be requesting data from the Flight Analogs (NEEMO, Bed Rest, D-Rats, etc)?

Provide a description of the types of subjects you need (e.g. gender, flight duration, age).

**Inclusion/Exclusion Criteria:**

Inclusion Criteria:

Exclusion Criteria:

**Level of data required:**

🞏 Pooled (individual data points are grouped):

If pooled data is requested, on what variable(s) does the data need to be pooled:

🞏 De-identified\* (Data points remain individual, but any identifying information has been removed.)

🞏 Identifiable (Individual data points with identifying information. Receipt of identifiable individual data requires written informed consent.)

\***It is preferable to provide data in a de-identified manner.** Please note that not all data is able to be de-identified. Certain combinations of variables, such as mission length and gender, will make astronaut data identifiable. Final de-identification of data sets is done on a case-by-case basis. If data cannot be sufficiently de-identified, written informed from the subject will be required.

**Type of data to be requested:**

Using the checklist below as a guide, please provide in detail the nature of the data that will be requested, the timing of data needed (i.e. annual exams, pre, in, post flight exams), special requirements for the data (e.g. 3T MRI vs. 1.5T MRI), and rationale for why particular data are being requested. Please use additional sheets if more room is necessary. Certain data are only collected at certain times, as evidenced by the X in the Pre-flight, In-flight, Post-flight, Annual columns. Also please note that no psychological or psychiatric data is kept in these medical and research archives. Please refer to the LSDA website at [https://lsda.jsc.nasa.gov](https://lsda.jsc.nasa.gov/) for research data. The data sets listed below may exist in the LSAH (medical) archives:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***Type of Assessments*** | ***Typical Variables / Data*** | ***Preflight*** | ***In-flight*** | ***Postflight*** | ***Annual / Other*** | ***Justification for Use of Data*** |
|  | **Clinical Assessment** | Diagnoses; Vitals; Review of systems | **X** |  | **X** | **X** |  |
|  | **Inflight (CMO) Health Status & Pre/Post EVA Evaluations** | Vitals, Med history, Physical exam, Blood chemistry, Urinalysis, Pulmonary |  | **X** |  |  |  |
|  | **Laboratory Testing (data from blood and urine samples)** | Hematology, Chemistry, Thyroid function, Iron, Lipid profile, C-reactive protein, Renal stone risk, Vitamin D status, Diabetes screening  Prostate screening (PSA) | **X** |  | **X** | **X** |  |
|  | **Infectious Disease Screenings** | For conditions such as MRSA, tuberculosis, H. pylori, etc., skin tests, chest x-rays, etc. | **X** |  | **X** | **X** |  |
|  | **Ultrasound Imaging** | Abdominal, Retroperitoneal,  Pelvic, Thyroid, Heart,  Carotid artery (started Nov2009) | **X** |  |  |  |  |
|  | **Other Imaging** | Brain MRI / MRA (started Nov2009), CT scans, X-rays,  Coronary Artery Calcium Scan, etc. | **X** |  |  |  |  |
|  | ***Type of Assessments*** | ***Typical Variables / Data*** | ***Preflight*** | ***In-flight*** | ***Postflight*** | ***Annual / Other*** | ***Justification for Use of Data*** |
|  | **Family Medical History** | Family medical history as pertains only to risks of chronic disease (e.g., cancer, cardiovascular disease) |  |  |  | **X** |  |
|  | **Medical History** | Certain medical history prior to astronaut selection exams |  |  |  | **X** |  |
|  | **Occupational Health History** | Job-related hazard exposures (such as radiation, chemicals, biologicals) or injuries/illnesses |  |  |  | **X** |  |
|  | **Allergy List** | Allergies and sensitivities |  |  |  | **X** |  |
|  | **Problems/ Diagnoses List** | Listing of Reported Medical Problems |  |  |  | **X** |  |
|  | **Risk Factors/Lifestyle Questionnaire** | Diet/exercise habits,  Caffeine, Tobacco, & Alcohol use, Sun exposure, Framingham Risk Score |  |  |  | **X** |  |
|  | **Selection / Qualifying Information** | Exams performed as part of astronaut selection, FAA certificate status, Diver certification |  |  |  | **X** |  |
|  | **Medication and Supplement recommendations and usage** | Records of physician-recommended medications and usage. Data such as medication, dose, frequency, effectiveness may exist in the EMR or inflight medical records (PMC, medication kits, flight surgeon logs, etc.) | **X** | **X** | **X** | **X** |  |
|  | **Consultant Records** | Records from consultants or other external medical providers from outside NASA (such as orthopedics, cardiology, neurology, ophthalmology) | **X** |  | **X** | **X** |  |
|  | **Clinical Data Derived from Private Medical Conferences** | Medication logs, diagnoses (e.g. headache), etc. |  | **X** |  |  |  |
|  | ***Type of Assessments*** | ***Typical Variables / Data*** | ***Preflight*** | ***In-flight*** | ***Postflight*** | ***Annual / Other*** | ***Justification for Use of Data*** |
|  | **Postflight Medical Debriefs** | Comments regarding inflight medical events, fluid loading, noise, sleep, re-entry issues, etc. |  |  | **X** |  |  |
|  | **Ophthalmology Examination and Imaging** | Questionnaire,  Visual acuity,  Refraction,  Automated visual fields,  Amsler grid, Pupil reflexes,  Extraocular muscle eval, Biomicroscopy,  Dilated fundoscopy, Retinal photography,  Tonometry, OCT, MRI, A-scan & 2-D ultrasound | **X** | **X** | **X** | **X** |  |
|  | **Audiometry** | Audiogram: hearing threshold at specific frequencies | **X** | **X** | **X** |  |  |
|  | **Dental Exam** | Dental history & exam, Periodontal eval, Oral cancer screening | **X** |  |  | **X** |  |
|  | **Dental Panorex** | Full dental orthopantomogram x-ray | **X** |  |  | **X** |  |
|  | **24-Hour Ambulatory ECG Monitoring** | 3-lead ECG (Holter) |  |  |  |  |  |
|  | **Pulmonary Function** | Lung function (Tidal Volume, etc.) | **X** |  | **X** | **X** |  |
|  | **Resting ECG** | 12-lead ECG | **X** |  | **X** | **X** |  |
|  | **Stand Test / Tilt Test** | 3-lead ECG, BP, Ultrasound images of aorta,  Stroke volume | **X** |  | **X** |  |  |
|  | **Aerobic Functional Capacity (treadmill or cycle ergometer)** | Max heart rate, Max VO2, Blood pressure, Work load, Perception of effort, 3- or 12-lead ECG | **X** | **X** | **X** | **X** |  |
|  | **Anthropometric Measurements** | Height, weight, BMI, body joint and segment height, length, breadth, circumference |  |  |  |  |  |
|  | ***Type of Assessments*** | ***Typical Variables / Data*** | ***Preflight*** | ***In-flight*** | ***Postflight*** | ***Annual / Other*** | ***Justification for Use of Data*** |
|  | **Isokinetic Testing** | Muscle strength (peak torque) and endurance (total work) | **X** |  | **X** |  |  |
|  | **Functional Fitness Assessment** | Skeletal muscle strength & Endurance, Flexibility, Agility, Balance, Hand grip | **X** |  | **X** | **X** |  |
|  | **On-orbit Strength & Conditioning Monitoring** | Inflight aerobic (treadmill,cycle ergometer, etc.) & Resistive (ARED, hand grip, etc.) exercise activity |  | **X** |  |  |  |
|  | **In-flight Calf Volume Measurement** | Calf volume |  | **X** |  |  |  |
|  | **Postflight Rehabilitation** | Physical fitness assessments |  |  | **X** |  |  |
|  | **Bone Densitometry (DXA)** | Measurements of whole body, Lumbar spine,  Proximal femora/hips, Heels, Forearm, etc.  Fat free body mass | **X** |  | **X** | **X** |  |
|  | **Colonoscopy** | Colonoscopy findings |  |  |  | **X** |  |
|  | **Nutritional Assessments** | Dietary intake, body composition, 48-hour urine measurements | **X** | **X** | **X** | **X** |  |
|  | **In-flight Body Mass Measurement** | Body mass using Mass Measurement Device |  | **X** |  |  |  |
|  | **Neurovestibular Platform Test** | Balance control, Sensory-motor integration | **X** |  | **X** |  |  |
|  | **Neurocognitive Assessment** | WinSCAT data | **X** | **X** | **X** |  |  |
|  | **Sleep Assessments** | Actiwatch, subjective sleep assessments  (e.g., sleep logs) | **X** | **X** | **X** |  |  |
|  | **Biodosimetry** | Whole body radiation dose equivalent, lymphocyte chromosomal aberrations | **X** |  | **X** |  |  |
|  | ***Type of Assessments*** | ***Typical Variables / Data*** | ***Preflight*** | ***In-flight*** | ***Postflight*** | ***Annual / Other*** | ***Justification for Use of Data*** |
|  | **In-flight Radiation Monitoring** | Radiation doses from crew worn or area dosimeters, TEPC, etc. |  | **X** |  |  |  |
|  | **EVA Data** | Frequency, duration, Prebreathe, ECG, body temperature, etc. |  | **X** |  |  |  |