

NOAA Flight Physical Guide

Initial Flight Physical		Long Flight Physical/5 Year Every 5 years or every year after the age of 50		Short Flight	
<u>Required Documentation:</u>	DD 2808 DD 2813 (dental)	DD 2807-1 DD 2992	Required Documentation	DD 2808 DD 2813 (dental)	DD 2807-1 DD 2992
<u>Vital signs:</u>	BP, HR, Ht, Wt, BMI, Temp		<u>Vital signs:</u>	BP, HR, Ht, Wt, BMI, Temp	
<u>Vision:</u>	Full eye exam: <u>Cycloplegic</u> uncorrected Oculomotor Balance Color vision, Depth Perception Field of Vision, Refraction, IOP		<u>Vision:</u>	Gross near and far if uncorrected, Oculomotor Balance, Refraction only with corrected vision, IOP	
<u>Labs:</u>	UA-micro, CBC, CMP, Fasting Lipids, G6PD, HIV, RPR, PPD		<u>Labs:</u>	UA-micro, CBC, CMP, Fasting Lipids, HIV, RPR, PPD, CK. SM will need a PSA if >40 y/o	
<u>Additional Tests:</u> EKG Chest X-ray Audiogram Framingham (if over 40) Pap Reading out loud	<u>Anthropometrics:</u> Sitting Height (SH) Sitting Eye Height (SHE) Thumb-Tip Reach (TTR) Buttock-Knee Length (BKL) Adding sitting Eye Height and Thumb-tip Reach (SHE+TTR)		EKG (within 4 years if >50 then every 2 years) Chest X-ray (if no base line in chart otherwise not needed) Audiogram Framingham (if over 40) Verify vaccinations and Flu up to date Female document PAP in last 12 months Digital rectal Males >40/Females Mammogram within 12 months ➤ 50 Y/o screening colonoscopy		<u>Additional Tests:</u> Audiogram, Dental, Annual PPD and updated immunizations to include flu shot Vision: <u>Print SF 600</u> Gross near and far if uncorrected, Refraction only with corrected vision, IOP <i>No labs required for short physical</i>

NOAA Aircrew Medical Exam Initial			NOAA Aircrew Medical Exam Yearly		
<u>Required Documentation:</u>	DD 2808 DD 2813 (dental)	DD 2807-1 DD 2992	Required Documentation	DD 2992 DD 2807-1	DD 2808
<u>Vital signs:</u>	BP, HR, Ht, Wt,		<u>Vital signs:</u>	BP, HR, Ht, Wt,	
<u>Vision:</u>	Optometry exam in the past year. Refraction with corrected vision otherwise gross near and far assessment		<u>Vision:</u>	Vision acuity near and far, optometry exam with refraction if acuity is less than 20/20 uncorrected (near and far)	
<u>Labs:</u>	UA-micro, CBC, CMP, Fasting Lipids,		<u>Labs:</u>	UA-micro, CBC, CMP, Fasting Lipids,	
<u>Additional Tests:</u>	Chest X-ray in the past 24 months, ECG in the past 12 months Reading aloud test, OSHA Respiratory Questionnaire		<u>Additional Tests:</u>	If >50 y/o: ECG, Tonometry, fecal occult blood test (if indicated)	
A current FAA Medical Certificate (Class 3) may be used as a substitute for the NOAA Aircrew Medical Examination			A current FAA Medical Certificate (Class 3) may be used as a substitute for the periodic NOAA Aircrew Medical Examination		

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APPENDIX C

Anthropometric Measurements

Sitting Height (SH)

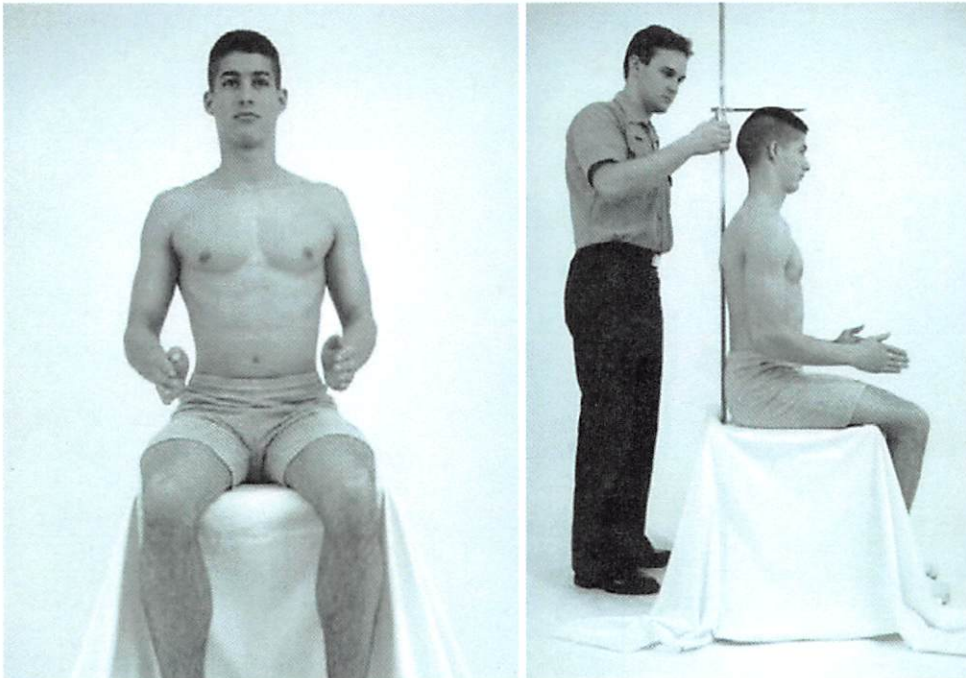
Purpose: This measurement is important in the design and layout of work stations occupied by NOAA personnel. Controls must be placed in numerous locations, and the minimum acceptable space between the helmet/head and the canopy/overhead of cockpits must be considered.

Equipment Required: Anthropometer

Measurement Procedure:

1. The subject sits erect facing forward with the head level (see pictures below), the shoulders and upper arms relaxed, and the forearms and hands extended forward horizontally with the palms facing each other. The thighs are parallel, and the knees are flexed 90° with the feet in line with the thighs.
2. Measure the vertical distance between the sitting surface and the top of the head with an anthropometer. The shoulders and upper extremities should be relaxed. Measure at the maximum point of quiet respiration.

Note: *Measurements are to be taken to the nearest eighth of an inch. The measurement should be taken at least twice. If there is a large variation between the two measurements, recheck body position and repeat the measurements.*



Sitting Eye Height (SEH)

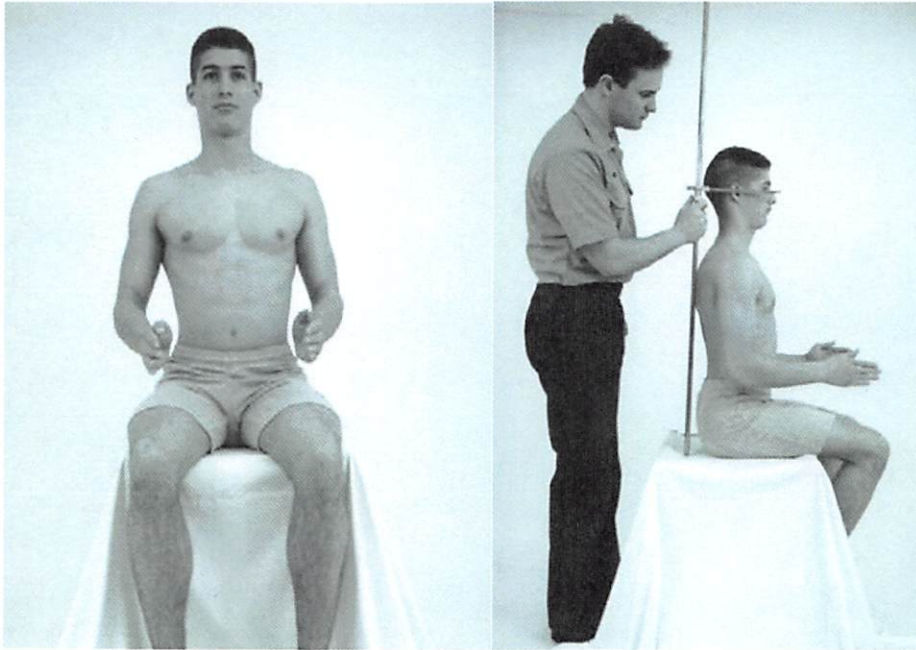
Purpose: Sitting Eye Height plays a decisive role in instrument panel layout, viewing angles, and seat adjustment. The pilot must have optimum vision both inside and outside of the cockpit.

Equipment Required: Anthropometer

Measurement Procedure:

1. The subject sits erect facing forward with the head level (see pictures below), the shoulders and upper arms relaxed, and the forearms and hands extended forward horizontally with the palms facing each other. The thighs are parallel and the knees are flexed 90° with the feet in line with the thighs.
2. Measure the vertical distance between the sitting surface and the corner or angle formed by the meeting of the eyelids on the outer corner of the right eye with an anthropometer.

NOTE: *Measurements are to be taken to the nearest eighth of an inch. Measurements should be taken at least twice. If there is a large variation between the two measurements, recheck body position and repeat measurements.*

**Thumb-Tip Reach (TTR)**

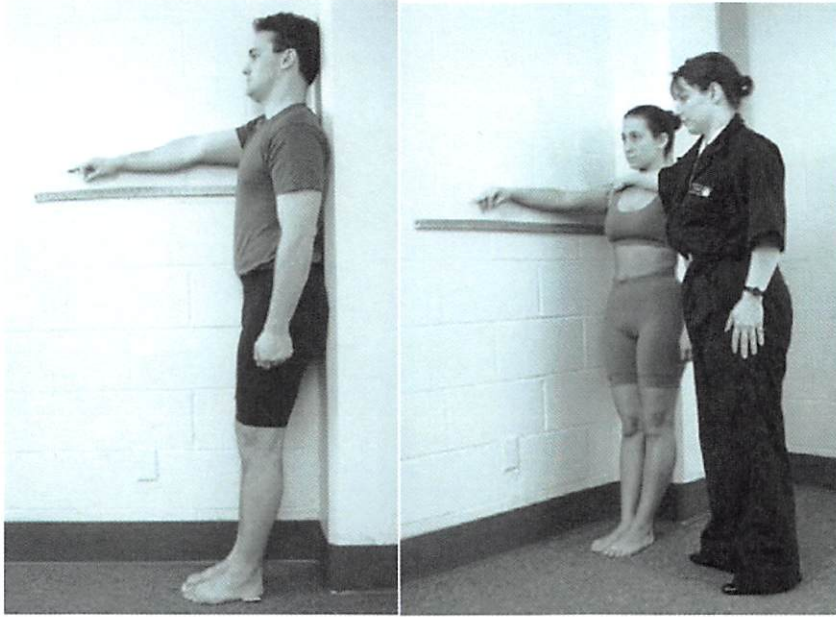
Purpose: This measurement is important in the design and layout of work stations occupied or used by NOAA personnel. Thumb-tip reach is particularly useful for the placement of controls in various locations within cockpits.

Equipment Required: Wall-mounted linear scale.

Measurement Procedure:

1. The subject stands erect in a corner looking straight ahead with the feet together and heels 7.87 inches (20 cm) from the back wall (see pictures below).
2. With the buttocks and shoulder placed against the wall, the right arm and hand (palm down) are stretched horizontally along the scale while the thumb continues along the horizontal line of the arm with the index finger curving around to touch the pad at end of the thumb.
3. The subject's right shoulder is held against the rear wall. The horizontal distance from the back wall to the tip of the right thumb is measured.

NOTE: *Measurements are to be taken to the nearest eighth of an inch. Measurements should be taken at least twice. If there is a large variation between the two measurements, recheck body position and repeat measurements.*



Buttock-Knee Length (BKL)

Purpose: This measurement is usually associated with ejection seat clearance and threshold values between the knee and the glare shield (or canopy bow).

Equipment Required: Anthropometer

Measurement Procedure:

1. While the subject sits erect, draw a landmark on the bottom tip of the right knee cap. The subject's thighs should be parallel, with the knees flexed at 90°. The feet should be in line with the thighs, and lying flat on the surface of a footrest or the floor (see pictures below).
2. The anthropometer is placed flush against the buttock plate at the most posterior point on either buttock, and the anterior point to the right knee is measured with an anthropometer.

NOTE: *Measurements are to be taken to the nearest eighth of an inch. Measurements should be taken at least twice. If there is a large variation between the two measurements, recheck body position and repeat measurements.*



APPENDIX B

NOAA Aviation Physical Examination Standards for Aviation Candidates

Candidates for flight training shall meet all the requirements of a designated aviator delineated in Appendix A of this manual. Additionally, the following requirements and limitations apply.

1. Vision Standards:

- a. Uncorrected distant visual acuity must be not less than 20/50 each eye and correctable to 20/20 each eye.
- b. Uncorrected near visual acuity must be not less than 20/20 each eye.
- c. While under the effects of a cycloplegic, the candidate must read 20/20 each eye. The following are potentially disqualifying:
 - 1) Total myopia greater than (minus) -1.50 diopters in any meridian;
 - 2) Total hyperopia greater than (plus) +3.00 diopters in any meridian;
 - 3) Astigmatism greater than (minus) -1.00 diopters.

Note: The purpose of the cycloplegic examination is to detect large latent refractive errors that could result in a change of classes during an aviation career. Therefore, the maximum correction tolerated at the acuity of 20/20 shall be reported.

d. Corneal Refractive Surgery (CRS):

- 1) Laser in-situ keratomileusis (LASIK), laser subepithelial keratomileusis (LASEK), photorefractive keratectomy (PRK), and wave-front guided PRK (WFG-PRK) are currently acceptable CRS methods for all aviation classes including applicants. NOAA will consider sending candidates for flight training who have had CRS by either a DOD or a civilian provider and meet all other enrollment criteria. CRS is an elective procedure and specific guidelines are outlined in Appendix D of this manual.
- 2) Candidates must have demonstrated refractive stability as confirmed by clinical records. Neither the spherical or cylindrical portion of the refraction may have changed more than 0.50 diopters during the two most recent postoperative manifest refractions separated by at least one month. The final manifest shall be performed no sooner than the end of the minimum waiting period (3 or 6 months depending on the degree of preoperative refractive error). The member must have postoperative uncorrected visual acuity of at least 20/50 correctable with lenses to at least 20/20 for near and distance vision.

2. Height:

- a. Minimum height - 157.4 cm (62 inches); Maximum height - 198 cm (78 inches);
- b. Candidates must satisfy the following anthropometric requirements. All results shall be reported in Block 73 (*Notes and Significant or Interval History*), Report of Medical Examination, DD-2808. Refer to Appendix C, *Anthropometric Measurements*, for guidelines on obtaining accurate measurements.
 - 1) Sitting Height (SH): 33 inches to 40.9 inches. Report as (SH____);
 - 2) Sitting Eye Height (SEH): 28.5 inches or greater. Report as (SEH____);
 - 3) Thumb-Tip Reach (TTR): 28.5 inches or greater. Report as (TTR____);
 - 4) Buttock-Knee Length (BKL): 21 inches to 27.9 inches. Report as (BKL____);
 - 5) Add Sitting Eye Height (SEH) and Thumb-tip Reach (TTR): 57 inches or greater. Report as (SEH + TTR =____).

3. Hearing: Baseline audiometric loss in excess of the limits set forth in the following table is potentially disqualifying:

FREQUENCY	500	1000	2000	3000	4000
EITHER EAR	30	25	25	45	45