

# MEDB 1.2 Crew Medical Officer Health Status Evaluations

## 3.2 Medical Requirements Overview

**TABLE 3.2: MEDICAL REQUIREMENTS OVERVIEW**

<b>MEDB# and Title:</b>	MEDB 1.2 Crew Medical Officer Health Status Evaluations
<b>Sponsor:</b>	Medical Operations
<b>Discipline:</b>	N/A
<b>Category:</b>	Medical Requirements
<b>References:</b>	SSP 50260 ISS Medical Operations Requirements Document (MORD) SSP 50667 Medical Evaluations Document (MED) Volume B
<b>Purpose/Objectives:</b>	To assess the medical status of the crewmember in-flight and report the findings to the Crew Surgeon.
<b>Measurement Parameters:</b>	Periodic Health Status (PHS) Evaluation: A. Vitals B. Physical Exam C. Labs- 1. Blood Chemistry ( per surgeon discretion) 2. Urinalysis ( per surgeon discretion)
<b>Deliverables:</b>	Data Collection Tool Form (and pictures if applicable)
<b>Flight Duration:</b>	≥ 30 days
<b>Number of Flights:</b>	All long-duration flights
<b>Number and Type of Crew Members Required:</b>	All Crewmembers
<b>Other Flight Characteristics:</b>	N/A

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## 3.3 Preflight Training

**TABLE 3.3: PREFLIGHT TRAINING**

<b>Preflight Training Activity Description:</b>	Two Crew Medical Officers (CMOs) per Soyuz are trained to collect vital signs and body imagery in the launch minus 15/12 month time-frame.			
	<b>Duration:</b>	<b>Schedule:</b>	<b>Flexibility:</b>	<b>Personnel Required:</b>
<b>Schedule:</b>	CMO Skills 1      3 hours	L-15/12months	+/- 1 to 3 months	Instructor/ CMOs
<b>Ground Support Requirements Hardware/Software</b>	<b>Preflight Hardware:</b>		<b>Preflight Software:</b>	<b>Test Location:</b>
	Station Support Computer (SSC) Medical Diagnostic Pack (Blood Pressure Device, Thermometer, Otoscope, Medical Supply Pack)		Data Collection Tool (DCT) software	U.S
<b>Training Facilities</b>	<b>Minimum Room Dimensions:</b>	<b>Number of Electrical Outlets:</b>	<b>Temperature Requirements:</b>	<b>Special Lighting:</b>
	Standard room, 8' x 10'	4 (U.S. 110V, Russia 220V)	Normal, 20° – 25°C.	Normal lighting with dimming capability
	<b>Hot or Cold Running Water:</b>	<b>Privacy Requirements:</b>	<b>Other:</b>	
	Running water needed for hand washing.	Private room required	Internet connection for SSC	
<b>Constraints/Special Requirements:</b>	N/A			
<b>Launch Delay Requirements:</b>	Refresher training to be scheduled @ Crew Surgeon or crew request			
<b>Notes:</b>	Training Procedures: SODF: ISS Med (Medical Checklist			

## 3.4 Preflight Activities – No Preflight Activities

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## 3.5 In-Flight Activities

**TABLE 3.5.1: IN-FLIGHT ACTIVITIES**

<b>In-Flight Activity</b>	<b>Description:</b>	These tests will be conducted periodically in flight and as clinically indicated.			
	<b>Schedule:</b>	<b>Duration:</b>	<b>Schedule:</b>	<b>Flexibility:</b>	<b>Personnel Required:</b>
		Setup: 10 minutes Exam: 15 minutes/CM CMO: 5 minutes/CM Stow: 10 minutes	<u>6 month mission</u> L+14/21 days Mid-mission R-21/14 days ACI  <u>1 year mission</u> L+14/21 days L+90 days Mid-mission L+270 days R-21/14 days ACI	+/- 3 days with additional latitude to allow scheduling efficiency across multiple expedition crews	CMO & Crew
<b>Procedures:</b>	SODF: ISS Medical Checklist				
<b>Constraints / Special Requirements:</b>	<ul style="list-style-type: none"> <li>-Schedule equipment setup prior to PHS</li> <li>-Exercise or any strenuous activity that results in sore muscles should not be performed 24 hours prior to PHS</li> <li>-Blood labs and/or Urinalysis per Surgeon discretion</li> <li>-Blood Volume 65µL (If requested by Crew Surgeon)</li> </ul>				
<b>Photo / TV Requirements:</b>	Imagery is required (digital otoscope)				
<b>Cold Stowage Requirements:</b>	N/A				
<b>Mission Extension Requirements:</b>	N/A				
<b>Data Delivery</b>	In-flight PHS discrete values are recorded in the DCT and will be saved along with PHS Otoscope images on the Station Support Computer (SSC) File Server. PHS data will be downlinked within the week of test completion from the SSC server. PHS data is archived within the Mission Extended Medical Enterprise (MEME) environment.				

**TABLE 3.5.2: IN-FLIGHT HARDWARE**

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Hardware/Software Name
Station Support Computer (SSC)
SSC Data Collection Tool Software
Medical Supply Pack
Medical Diagnostic Pack

### 3.6 Postflight Activities – No Postflight Activities

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## 3.7 Summary Schedule

**TABLE 3.7: SUMMARY SCHEDULE**

ACTIVITY	DURATION	SCHEDULE	FLEXIBILITY	PERSONNEL REQUIRED	CONSTRAINTS
<b>Preflight Training</b>					
CMO Skills 1	3 hours	L-15/12 months	+/- 1 to 3 months	Instructor/CMOs	N/A
<b>Preflight: N/A</b>					
<b>In-Flight</b>					
PHS	Setup: 10 minutes Exam: 15 minutes/CM CMO: 5 minutes/CM Stow: 10 minutes	<u>6 month mission</u> L+14/21 days Mid-mission R-21/14 days ACI  <u>1 year mission</u> L+14/21 days L+90 days Mid-mission L+270 days R-21/14 days ACI	+/- 3 days with additional latitude to allow scheduling efficiency across multiple expedition crews	CMO & Crew	-Schedule equipment setup prior to PHS. -Blood labs and/or Urinalysis per Surgeon discretion. -Strenuous activity that results in sore muscles should not be performed 24 hours prior to PHS.
<b>Postflight – N/A</b>					
<b>Postflight Debrief</b>					
PHS	Included as part of the overall Med Ops debrief				