**Supplemental Material S1.** Lifetime Exposure to Noise and Solvents Questionnaire (LENS-Q).

## LIFETIME EXPOSURE TO NOISE AND SOLVENTS QUESTIONNAIRE (LENS-Q)

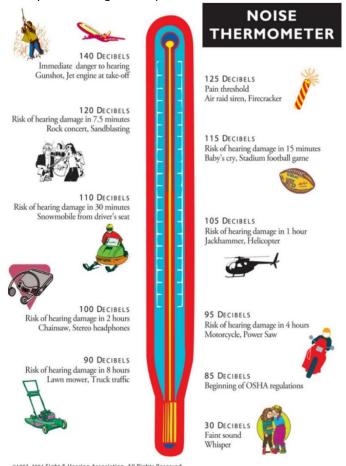
We are interested in knowing about your noise and solvent/chemical exposure history over your entire lifetime. This questionnaire is divided into 3 parts:

- 1) your **NON-MILITARY, OCCUPATIONAL** noise and solvent/chemical exposure;
- 2) your MILITARY, OCCUPATIONAL noise and solvent/chemical exposure;
- 3) your NON-OCCUPATIONAL/RECREATIONAL noise and solvent/chemical exposure.

### **NON-MILITARY, OCCUPATIONAL EXPOSURE HISTORY**

The following questions are about your **NON-MILITARY, OCCUPATIONAL** noise and solvent/chemical exposure history. This includes all occupations **OUTSIDE** of your military career. Please answer the questions thinking only about occupational exposures you had during the time period **before**, **between** or **after** your military career.

To help you understand what we mean by "exposed to loud noise" see the "NOISE THERMOMETER" provided in your questionnaire packet for examples of loud sounds. You are most likely "exposed to loud noise" if you are around activities at or above 85 decibels. Another example of loud noise is noise that makes it hard to talk to or hear another person or makes your ears ring after exposure.



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Please answer each question by marking or writing the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.

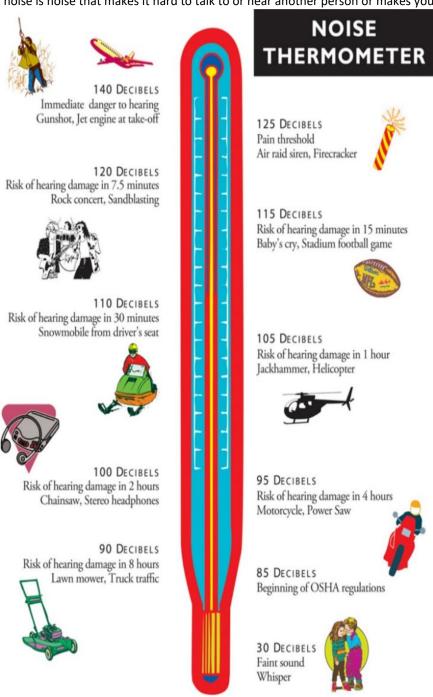
NON-Military Occupation	onal			n job you answer j er additional ques		<u>loud</u> noise?					6. How often did you use hearing protection while in <u>loud</u> noise?			
1. Did you work any of of jobs?	these t	ypes Yes	2. Year started (YYYY)	3. Year ended (YYYY) if current, put this year	4. Length of time at job (#yrs/mos)	Never	Several times a year	Several times a month	Several times a week	Daily	Never	Some of the time	Most of the time	Always
A. Automotive	0	0			/	0	Ő	0	0	0	0	0	0	O
B. Construction	0	0			/	0	0	0	0	0	0	0	0	0
C. Industrial	0	0			/	0	0	0	0	0	0	0	0	0
D. Manufacturing	0	0			/	0	0	0	0	0	0	0	0	0
E. Carpentry	0	0			/	0	0	0	0	0	0	0	0	0
F. Airport Staff	0	0			/	0	0	0	0	0	0	0	0	0
G. Agricultural / Farming	0	0			/	0	0	0	0	0	0	0	0	0
H. Logging/Lumber industry	0	0			/	0	0	0	0	0	0	0	0	0
I. Mining	0	0			/	0	0	0	0	0	0	0	0	0
J. Printing	0	0			/	0	0	0	0	0	0	0	0	0
K. Entertainment (nightclubs, disco, concert, live show, sporting event)	0	0			/	0	0	0	0	0	0	0	0	0
L. Musician (band, orchestra, symphony)	0	0			/	0	0	0	0	0	0	0	0	0
M. Transportation (ship, train, plane, truck)	0	0			/	0	0	0	0	0	0	0	0	0
N. Fisherman / Merchant Marine	0	0			/	0	0	0	0	0	0	0	0	0
O. Emergency (police, fire, EMT)	0	0			/	0	0	0	0	0	0	0	0	0
Other jobs: P.				/	0	0	0	0	0	0	0	0	0	
Q.					/	0	0	0	0	0	0	0	0	0
R.					/_	0	0	0	0	0	0	0	0	0

NON-Military Occupation Solvent/Chemical Expos			For each job you answer yes, please answer additional questions 2-6					ere you in c	ontact with ical?	this	6. How often did you wear protective gear? (respirator, eye gear, mask, face shield, gloves, clothes)			
1. Have you ever been in with any of the follow or chemicals?			2. Year started (YYYY)	3. Year ended (YYYY) if current, put this year	4. Length of time exposed (#yrs/mos)	Never	Several times a year	Several times a month	Several times a week	Daily	Never	Some of the time	Most of the time	Always
A. Ethyl benzene	0	0			/	0	0	0	0	0	0	0	0	0
B. Toluene	0	0			/	0	0	0	0	0	0	0	0	0
C. Xylene	0	0			/	0	0	0	0	0	0	0	0	0
D. Styrene	0	0			/	0	0	0	0	0	0	0	0	0
E. n-Hexane	0	0			/	0	0	0	0	0	0	0	0	0
F. Carbon monoxide	0	0			/	0	0	0	0	0	0	0	0	0
G.Trichloroethylene (TCE)	0	0			/	0	0	0	0	0	0	0	0	0
H. Lead	0	0			/	0	0	0	0	0	0	0	0	0
I. Acrylonitrile	0	0			/	0	0	0	0	0	0	0	0	0
J. n-Butylalcohol	0	0			/	0	0	0	0	0	0	0	0	0
K. Carbon Disulfide	0	0			/	0	0	0	0	0	0	0	0	0
L. Cyanide (including hydrogen cyanide)	0	0			/	0	0	0	0	0	0	0	0	0
M. n-Heptane	0	0			/	0	0	0	0	0	0	0	0	0
N. Mercury (alkyl compounds)	0	0			/	0	0	0	0	0	0	0	0	0
O. Mercury (inorganic compounds)	0	0			/	0	0	0	0	0	0	0	0	0
P. Mercury (vapor)	0	0			/	0	0	0	0	0	0	0	0	0
Q. x-Methyl-styrene	0	0			/	0	0	0	0	0	0	0	0	0
R. Welding fumes	0	0			/	0	0	0	0	0	0	0	0	0
S. Burn pits	0	0			/	0	0	0	0	0	0	0	0	0

### **MILITARY OCCUPATIONAL EXPOSURE HISTORY**

The following questions are about your **MILITARY OCCUPATIONAL** noise and solvent/chemical exposure history. This includes all occupations **DURING** your military career. Please answer the questions thinking only about occupational exposures you had during the time period **before**, **between** or **after** your military career.

To help you understand what we mean by "exposed to loud noise" see the "NOISE THERMOMETER" provided in your questionnaire packet for examples of loud sounds. You are most likely "exposed to loud noise" if you are around activities at or above 85 decibels. Another example of loud noise is noise that makes it hard to talk to or hear another person or makes your ears ring after exposure.



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Please answer each question by marking or writing in the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.

			For eac	ch job you answei	r yes, please	5. D	uring that t	time, how o	often were	you	6. How	often die	d you use	hearing
Military Occupational			answ	er additional que	estions 2-6		arou	ınd <u>loud</u> no	ise?		prote	ction whi	le in <u>loud</u>	noise?
			2. Year	3. Year ended	4. Length of									
			started	(YYYY)	time at job		Several	Several	Several			Some	Most	
1. What jobs did you have d	uring y	your	(YYYY)	if current, put	(#yrs/mos)		times a	times a	times a			of the	of the	
MILITARY service?				this year		Never	year	month	week	Daily	Never	time	time	Always
JOB TITLE 1:					/	0	0	0	0	0	0	0	0	0
Occupational Specialty Code	e (MOS	; Ranki	ng):											
Were you exposed to any of	the fol	lowing	during you	r time in this job	?									
	No	Yes												
A. Artillery	0	0			/	0	0	0	0	0	0	0	0	0
B. Explosion	0	0			/	0	0	0	0	0	0	0	0	0
C. Planes, Helicopters	0	0			/	0	0	0	0	0	0	0	0	0
D. Small arms	0	0			/	0	0	0	0	0	0	0	0	0
E. Tanks, other heavy equipment	0	0			/	0	0	0	0	0	0	0	0	0
F. Aircraft carriers, ships, submarines	0			/	0	0	0	0	0	0	0	0	0	
G. Other:	0	0			/	0	0	0	0	0	0	0	0	0
JOB TITLE 2:					/	0	0	0	0	0	0	0	0	0
Occupational Specialty Code	e (MOS	; Ranki	ng):											
Were you exposed to any of	the fol	lowing	during you	r time in this job	?									
	No	Yes												
A. Artillery	0	0			/_	0	0	0	0	0	0	0	0	0
B. Explosion	0	0			/	0	0	0	0	0	0	0	0	0
C. Planes, Helicopters	0	0			/	0	0	0	0	0	0	0	0	0
D. Small arms	0	0			/	0	0	0	0	0	0	0	0	0
E. Tanks, other heavy equipment	0	0			/	0	0	0	0	0	0	0	0	0
F. Aircraft carriers, ships, submarines	0	0			/	0	0	0	0	0	0	0	0	0
G. Other:	0	0			/	0	0	0	0	0	0	0	0	0

Military Occupational				ch job you answei er additional que	•	5. D	uring that t	time, how o		you			d you use le in <u>loud</u>	•
What jobs did you have demonstrated the MILITARY service?	uring y	our/	2. Year started (YYYY)	3. Year ended (YYYY) if current, put this year	4. Length of time at job (#yrs/mos)	Never	Several times a year	Several times a month	Several times a week	Daily	Never	Some of the time	Most of the time	Always
JOB TITLE 3:					/	0	0	0	0	0	0	0	0	0
Occupational Specialty Code	(MOS	; Ranki	ng):											
Were you exposed to any of t	the fol	lowing	during you	r time in this job	?									
	No	Yes												
A. Artillery	0	0			/_	0	0	0	0	0	0	0	0	0
B. Explosion	0	0			/_	0	0	0	0	0	0	0	0	0
C. Planes, Helicopters	0	0			/	0	0	0	0	0	0	0	0	0
D. Small arms	0	0			/	0	0	0	0	0	0	0	0	0
E. Tanks, other heavy equipment	Tanks, other heavy OO				/	0	0	0	0	0	0	0	0	0
F. Aircraft carriers, ships, submarines					/	0	0	0	0	0	0	0	0	0
G. Other:	0	0			/	0	0	0	0	0	0	0	0	0
JOB TITLE 4:					/	0	0	0	0	0	0	0	0	0
Occupational Specialty Code	(MOS	; Ranki	ng):											
Were you exposed to any of t	the fol	lowing	during you	ır time in this job	?									
	No	Yes												
A. Artillery	0	0			/	0	0	0	0	0	0	0	0	0
B. Explosion	0	0			/	0	0	0	0	0	0	0	0	0
C. Planes, Helicopters	0	0			/	0	0	0	0	0	0	0	0	0
D. Small arms	0	0			/	0	0	0	0	0	0	0	0	0
E. Tanks, other heavy equipment	0	0			/	0	0	0	0	0	0	0	0	0
F. Aircraft carriers, ships, submarines	0	0			/	0	0	0	0	0	0	0	0	0
G. Other:	0	0			/	0	0	0	0	0	0	0	0	0

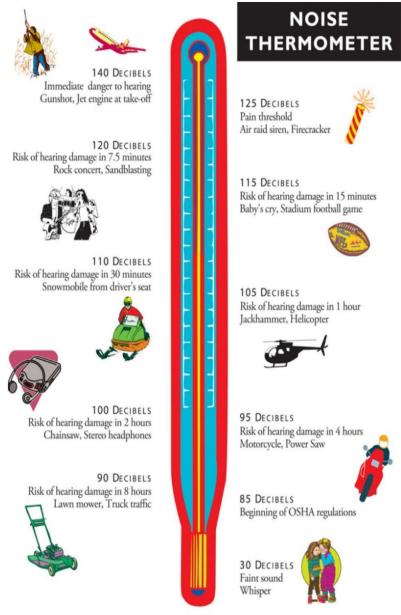
Please tell us about any solvent or chemical exposures that you have had in your **MILITARY** work environment

Military Occupational Solvent/Chemical Expos 1. Have you ever been i	sures		For each	n job you answer er additional que	yes, please		w often we	ere you in co ent or chem		this	6. How often did you wear protective gear? (respirator, eye gear, mask, face shield, gloves, clothes)			
with any of the follow or chemicals?		lvents	2. Year started (YYYY)	3. Year ended (YYYY) if current, put this year	4. Length of time exposed (#yrs/mos)	Never	Several times a year	Several times a month	Several times a week	Daily	Never	Some of the time	Most of the time	Always
A. Ethyl benzene	0	0			/	0	0	0	0	0	0	0	0	0
B. Toluene	0	0			/	0	0	0	0	0	0	0	0	0
C. Xylene	0	0			/	0	0	0	0	0	0	0	0	0
D. Styrene	0	0			/	0	0	0	0	0	0	0	0	0
E. n-Hexane	0	0			/	0	0	0	0	0	0	0	0	0
F. Carbon monoxide	0	0			/	0	0	0	0	0	0	0	0	0
G.Trichloroethylene (TCE)	0	0			/	0	0	0	0	0	0	0	0	0
H. Lead	0	0			/	0	0	0	0	0	0	0	0	0
I. Acrylonitrile	0	0			/	0	0	0	0	0	0	0	0	0
J. n-Butylalcohol	0	0			/	0	0	0	0	0	0	0	0	0
K. Carbon Disulfide	0	0			/	0	0	0	0	0	0	0	0	0
L. Cyanide (including hydrogen cyanide)	0	0			/	0	0	0	0	0	0	0	0	0
M. n-Heptane	0	0			/	0	0	0	0	0	0	0	0	0
N. Mercury (alkyl compounds)	0	0			/	0	0	0	0	0	0	0	0	0
O. Mercury (inorganic compounds)	0	0			/	0	0	0	0	0	0	0	0	0
P. Mercury (vapor)	0	0			/	0	0	0	0	0	0	0	0	0
Q. x-Methyl-styrene	0	0			/	0	0	0	0	0	0	0	0	0
R. Welding fumes	0	0			/	0	0	0	0	0	0	0	0	0
S. Burn pits	0	0			/	0	0	0	0	0	0	0	0	0

#### **NON-OCCUPATIONAL** EXPOSURE HISTORY

The following questions are about your **NON-OCCUPATIONAL** noise exposure history. Please answer the questions thinking about non-occupational noise exposures you have experienced over your entire lifetime both in and out of the military. This would include recreational and leisure activities that you have participated in over your lifetime.

To help you understand what we mean by "exposed to loud noise" see the "NOISE THERMOMETER" provided in your questionnaire packet for examples of loud sounds. You are most likely "exposed to loud noise" if you are around activities at or above 85 decibels. Another example of loud noise is noise that makes it hard to talk to or hear another person or makes your ears ring after exposure.



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Please answer each question by marking or writing the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.

NON-Occupational	<u>,                                      </u>		If yes,	please answer	•	that time, h				5. He	ow often o	did you use	_
				al questions 2-5			noise?			pro	tection w	hile in <u>loud</u>	noise?
Have you been exposed to during any of these non-job-activities?	related		2. Age first started	3. Approximate duration (#yrs/mos)		Several times a	Several times a	Several times a			Some of the	Most of the	
	No	Yes			Never	year	month	week	Daily	Never	time	time	Always
Gunfire: Have you ever used				T									
A. Pistol	0	0		/	0	0	0	0	0	0	0	0	0
B. Revolver	0	0		/	0	0	0	0	0	0	0	0	0
C. Rifle	0	0		/	0	0	0	0	0	0	0	0	0
D. Shotgun	0	0		/	0	0	0	0	0	0	0	0	0
Have you ever been													
E. Hunting	0	0		/	0	0	0	0	0	0	0	0	0
F. Target Shooting	0	0		/	0	0	0	0	0	0	0	0	0
Transportation: Have you ev													
A. Motorboat	0	0		/_	0	0	0	0	0	0	0	0	0
B. Motorcycle	0	0		/	0	0	0	0	0	0	0	0	0
C. Snow mobile	0	0		/	0	0	0	0	0	0	0	0	0
Music: Have you ever attend	ed a?	,											
A. Rock concert	0	0		/	0	0	0	0	0	0	0	0	0
B. Jazz concert	0	0		/	0	0	0	0	0	0	0	0	0
C. Discotheque / Nightclub	0	0		/	0	0	0	0	0	0	0	0	0
Music: Have you ever perform	med in	a?											
D. Rock band	0	0		/	0	0	0	0	0	0	0	0	0
E. Orchestra	0	0		/	0	0	0	0	0	0	0	0	0
F. Symphony	0	0		/	0	0	0	0	0	0	0	0	0
Music: Have you ever used	?												
G. Stereo headphones,					How often did you listen to								
earphones or earbuds?	0	0		/	Never O		mes a year	Several t mon O	th	Several we	ek		oaily O

NON-Occupational				nnswer additional tions 2-5	4. Duri	ng that time	, how often noise?	were you a	round <u>loud</u>	5. How often did you use hearing protection while in <u>loud</u> noise?				
1. Have you been exp during any of these no related activities?	on-job-		2. Age first started	3. Approximate duration (#yrs/mos)		Several times a	Several times a	Several times a			Some of	Most of		
M 1 1: /p	No	Yes			Never	year	month	week	Daily	Never	the time	the time	Always	
Woodworking/Power		-	ou ever used a	· 										
A. Drill, electric	0	0		/	0	0	0	0	0	0	0	0	0	
B. Drill, pneumatic	0	0		/	0	0	0	0	0	0	0	0	0	
C. Hammer	0	0		/	0	0	0	0	0	0	0	0	0	
D. Jointer	0	0		/	0	0	0	0	0	0	0	0	0	
E. Lathe	0	0		/	0	0	0	0	0	0	0	0	0	
F. Molder	0	0		/	0	0	0	0	0	0	0	0	0	
G. Planer	0	0		/	0	0	0	0	0	0	0	0	0	
H. Router	0	0		/	0	0	0	0	0	0	0	0	0	
I. Sander	0	0		/	0	0	0	0	0	0	0	0	0	
J. Power saw	0	0		/	0	0	0	0	0	0	0	0	0	
Recreation: Have you	ever at	ttended	a Professional o	r College										
A. Basketball game	0	0		/	0	0	0	0	0	0	0	0	0	
B. Football game	0	0		/	0	0	0	0	0	0	0	0	0	
C. Hockey game	0	0		/	0	0	0	0	0	0	0	0	0	
D. Baseball game	0	0		/	0	0	0	0	0	0	0	0	0	
Recreation: Have you	ever at	ttended	a											
A. Aerobics exercise class	0	0		/	0	0	0	0	0	0	0	0	0	
B. Car race	0	0		/	0	0	0	0	0	0	0	0	0	
C. Monster truck show	0	0		/	0	0	0	0	0	0	0	0	0	
D. Demolition derby	0	0		/	0	0	0	0	0	0	0	0	0	
E. Fireworks show	0	0		/	0	0	0	0	0	0	0	0	0	

NON-Occupational				se answer additional uestions 2-5	4. Durii	ng that time,	how often w noise?	ere you arou	ınd <u>loud</u>			d you use ile in <u>loud</u>	_
1. Have you been expo during any of these no activities?			2. Age first started	3. Approximate duration (#yrs/mos)	Never	Several times a year	Several times a month	Several times a week	Daily	Never	Some of the time	Most of the time	Always
Yard and garden: Have	e you ev	er used	l a										
A. Chain saw	0	0		/	0	0	0	0	0	0	0	0	0
B. Tractor	0	0		/	0	0	0	0	0	0	0	0	0
C. Lawn mower, gas powered	0	0		/	0	0	0	0	0	0	0	0	0
D. Edger/trimmer	0	0		/	0	0	0	0	0	0	0	0	0
E. Leaf blower	0	0		/	0	0	0	0	0	0	0	0	0
F. Weed whacker	0	0		/	0	0	0	0	0	0	0	0	0
G. Snow blower	0	0		/	0	0	0	0	0	0	0	0	0
Other: Have you been	expose	d to any	other non-o	ccupational noise sour	ces?					•	•		
H. Other 1:	0	0		/	0	0	0	0	0	0	0	0	0
I. Other 2:	0	0		/	0	0	0	0	0	0	0	0	0

# Sudden, intense noise:

Have you ever undergone any			Type of noise you were exposed to:	Your age when exposed:	Which ea	r or side of yo	our head was	exposed?
non-occupational accidental	No	Yes			Left	Right	Both	
exposure to sudden, intense	0	0			ear/side	ear/side	ears/sides	Not sure
noise?					0	0	0	

Please tell us about any solvent or chemical exposures that you have had in your in your NON-Occupational/Recreational activities

•	DN-Occupational Solvent/Chemical For each job you answer yes, posures  Approximately any solvent or chemical exposures from the posures from the position f								ontact with		6. How	often did	you wear p	rotective
Exposures	<b>,</b>							nt or chem					eye gear, n	
1. Have you been in con	tact wit	th any										shield, glo	ves, clothe	s)
of the following solvent		micals	2. Year	3. Year ended	4. Length of									
in your NON-Occupation	nal or		started	(YYYY)	time		Several	Several	Several			Some of		
Recreation activities?	<b>N</b> 1 -	<b>V</b> = =	(YYYY)	if current, put	exposed		times a	times a	times a	D :1	١	the	Most of	
A. Ethyl benzene	No O	Yes		this year	(#yrs/mos)	Never	year O	month O	week O	Daily	Never O	time	the time	Always O
B. Toluene	0	0				0	0	0	0	0	0	0	0	0
C. Xylene	0	0			/	0	0	0	0	0	0	0	0	0
D. Styrene	0	0			/	0	0	0	0	0	0	0	0	0
E. n-Hexane	0	0			/	0	0	0	0	0	0	0	0	0
F. Carbon monoxide	0	0			/	0	0	0	0	0	0	0	0	0
G.Trichloroethylene (TCE)	0	0			/	0	0	0	0	0	0	0	0	0
H. Lead	0	0			/	0	0	0	0	0	0	0	0	0
I. Acrylonitrile	0	0			/	0	0	0	0	0	0	0	0	0
J. n-Butylalcohol	0	0			/	0	0	0	0	0	0	0	0	0
K. Carbon Disulfide	0	0			/	0	0	0	0	0	0	0	0	0
L. Cyanide (including hydrogen cyanide)	0	0			/	0	0	0	0	0	0	0	0	0
M. n-Heptane	0	0			/	0	0	0	0	0	0	0	0	0
N. Mercury (alkyl compounds)	0	0			/	0	0	0	0	0	0	0	0	0
O. Mercury (inorganic compounds)	0	0			/	0	0	0	0	0	0	0	0	0
P. Mercury (vapor)	0	0			/	0	0	0	0	0	0	0	0	0
Q. x-Methyl-styrene	0	0			/	0	0	0	0	0	0	0	0	0
R. Welding fumes	0	0			/	0	0	0	0	0	0	0	0	0
S. Burn pits	0	0			/	0	0	0	0	0	0	0	0	0