Evaluating HRI Risk: Heat Index

NOAA Heat Index

NW	S He	at Ir	ndex		Temperature (°F)											
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131								n	RAC
95	86	93	100	108	117	127										
10	87	95	103	112	121	132										TEE
		Like	lihood	l of He	at Dis	order	s with	Prolo	nged E	xposi	ure or	Strenı	ious A	ctivity	/	
		Cautio	n		Extreme Caution						Danger	- 8	E)	treme	Dange	er





Evaluating HRI Risk: WBGT



Wet Bulb Globe Temperature (WBGT) incorporates the environmental factors of:

- Air temperature
- Humidity
- Air movement (wind)
- Radiant heat

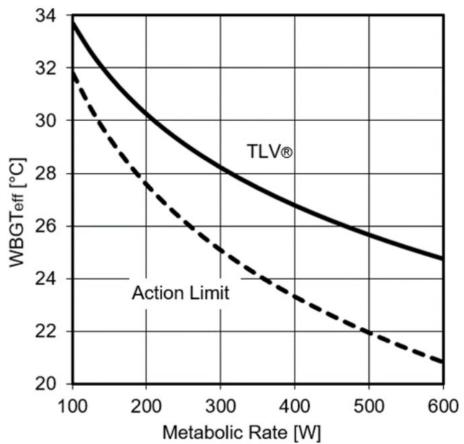


Evaluating HRI Risk: WBGT

Threshold Limit Value (TLV): [°C] = 56.7 – 11.5 log10M[W]

Action Limit (AL): [°C] = 60.0 – 14.1 log10M[W]

<u>The TLV assumes complete recovery from</u> <u>previous heat stress exposures before</u> <u>subsequent exposure.</u>





Evaluating HRI Risk: WBGT

WBGTin = 0.7Tnwb + 0.3Tg

(indoors or outdoors with shade or cloudy day-negligible solar radiation)

WBGTout = 0.7Tnwb + 0.2Tg + 0.1Tdb (no cloud cover-direct exposure to sunlight)

- Tnwb = Natural wet-bulb temperature
- Tg = Globe thermometer temperature (a.k.a. black globe thermometer
- Tdb = Dry-bulb temperature

