| | , | | |
|-------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| Adjusted temperature (°F)† | Light work (minutes work/rest) | Moderate work (minutes work/rest) | Heavy work (minutes work/rest) |
| 90 | Normal | Normal | Normal |
| 91 | Normal | Normal | Normal |
| 92 | Normal | Normal | Normal |
| 93 | Normal | Normal | Normal |
| 94 | Normal | Normal | Normal |
| 95 | Normal | Normal | 45/15 |
| 96 | Normal | Normal | 45/15 |
| 97 | Normal | Normal | 40/20 |
| 98 | Normal | Normal | 35/25 |
| 99 | Normal | Normal | 35/25 |
| 100 | Normal | 45/15 | 30/30 |
| 101 | Normal | 40/20 | 30/30 |
| 102 | Normal | 35/25 | 25/35 |
| 103 | Normal | 30/30 | 20/40 |
| 104 | Normal | 30/30 | 20/40 |
| 105 | Normal | 25/35 | 15/45 |
| 106 | 45/15 | 20/40 | Caution [‡] |
| 107 | 40/20 | 15/45 | Caution [‡] |
| 108 | 35/25 | Caution [‡] | Caution [‡] |
| 109 | 30/30 | Caution [‡] | Caution [‡] |
| 110 | 15/45 | Caution [‡] | Caution [‡] |
| 111 | Caution [‡] | Caution [‡] | Caution [‡] |
| 112 | Caution [‡] | Caution [‡] | Caution [‡] |







| Extreme Heat Stay Times | | | | | |
|-------------------------|--|---------------|-------------------|--|--|
| Air Temperature (°F) | Not applicable if wearing anything heavier than work clothes or category 0 – 2 fire retardant clothing | | | | |
| | Light Work | Moderate Work | Heavy Work | | |
| Greater than 123 | Consult Corporate Safety | | | | |
| 120 to 123 | Consult Corporate Safety or Use Ice/Cool Vests | | | | |
| 115 to 120 | 15 minutes | | | | |
| 110 to 115 | 20 minutes | | | | |
| 105 to 110 | 30 minutes | 20 minutes | | | |
| 100 to 105 | 50 minutes | 25 minutes | | | |
| 95 to 100 | 1 hour 15 minutes | 30 minutes | 15 minutes | | |
| 90 to 95 | 2 hours | 45 minutes | 20 minutes | | |
| 85 to 90 | 3 hours 15 minutes | 50 minutes | 40 minutes | | |
| 80 to 85 | Limited | 3 hours | 1 hour 30 minutes | | |
| Less than 80 | by Employee Tolerance | | | | |





| Temperature (°F) | Light Work Minutes Work/Rest | Moderate Work Minutes Work/Rest | Heavy Work Minutes Work/Rest |
|---------------------|---------------------------------------|--|---------------------------------------|
| 90 | Normal | Normal | Normal |
| 91 | Normal | Normal | Normal |
| 92 | Normal | Normal | Normal |
| 93 | Normal | Normal | Normal |
| 94 | Normal | Normal | Normal |
| 95 | Normal | Normal | 45/15 |
| 96 | Normal | Normal | 45/15 |
| 97 | Normal | Normal | 40/20 |
| 98 | Normal | Normal | 35/25 |
| 99 | Normal | Normal | 35/25 |
| 100 | Normal | 45/15 | 30/30 |
| 101 | Normal | 40/20 | 30/30 |
| 102 | Normal | 35/25 | 25/35 |
| 103 | Normal | 30/30 | 20/40 |
| 104 | Normal | 30/30 | 20/40 |
| 105 | Normal | 25/35 | 15/45 |
| 106 | 45/15 | 20/40 | Caution |
| 107 | 40/20 | 15/45 | Caution |
| 108 | 35/25 | Caution | Caution |
| 109 | 30/30 | Caution | Caution |
| 110 | 15/45 | Caution | Caution |
| 111 | Caution | Caution | Caution |
| 112 | Caution | Caution | Caution |

NIOSH Work/Rest Schedule:

 Based on air temperature, with adjustments for direct sunlight and humidity.

Assumes workers are:

- Physically fit
- Well-rested
- Fully hydrated
- Under age 40
- Environment has 30% humidity and perceptible air movement





| Temperature (°F) | Light Work Minutes Work/Rest | Moderate Work Minutes Work/Rest | Heavy Work Minutes Work/Rest |
|---------------------|---------------------------------------|--|---------------------------------------|
| 90 | Normal | Normal | Normal |
| 91 | Normal | Normal | Normal |
| 92 | Normal | Normal | Normal |
| 93 | Normal | Normal | Normal |
| 94 | Normal | Normal | Normal |
| 95 | Normal | Normal | 45/15 |
| 96 | Normal | Normal | 45/15 |
| 97 | Normal | Normal | 40/20 |
| 98 | Normal | Normal | 35/25 |
| 99 | Normal | Normal | 35/25 |
| 100 | Normal | 45/15 | 30/30 |
| 101 | Normal | 40/20 | 30/30 |
| 102 | Normal | 35/25 | 25/35 |
| 103 | Normal | 30/30 | 20/40 |
| 104 | Normal | 30/30 | 20/40 |
| 105 | Normal | 25/35 | 15/45 |
| 106 | 45/15 | 20/40 | Caution |
| 107 | 40/20 | 15/45 | Caution |
| 108 | 35/25 | Caution | Caution |
| 109 | 30/30 | Caution | Caution |
| 110 | 15/45 | Caution | Caution |
| 111 | Caution | Caution | Caution |
| 112 | Caution | Caution | Caution |

Temperature Adjustments for this Work/Rest Schedule are based on:

Environmental conditions:

- Full sun (no clouds): Add 13 °F
- Partly cloudy/overcast: Add 7 °F
- No shadows visible, in the shade, or at night: No adjustment.

-AND -

Humidity:

- 40% humidity: Add 3 °F
- 50% humidity: Add 6 °F
- 60% humidity or more: Add 9 °F





^{*}From NIOSH Criteria for a Recommended Standard, Occupational Exposure to Heat and Hot Environments, https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf.

Examples of Work at Different Intensity Levels

Light work:

- Operating equipment
- Inspection work
- Walking on flat, level ground
- Using light hand tools (wrench, pliers, etc.). However, this may be moderate work depending on the task
- Travel by conveyance



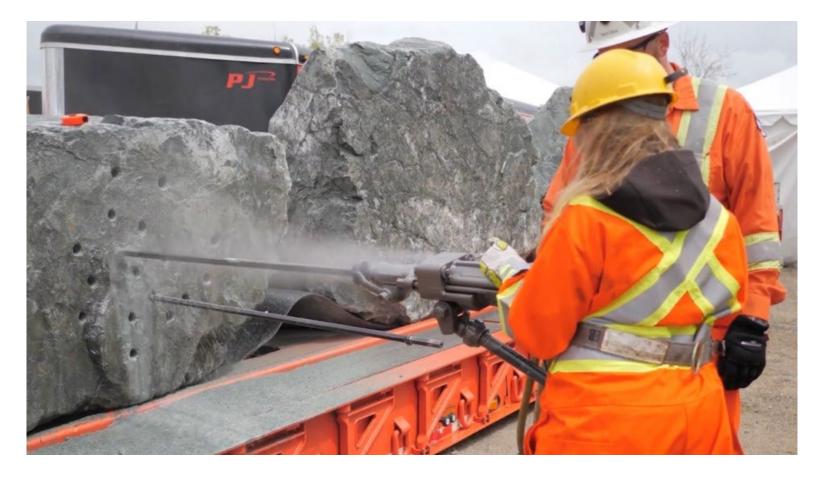




Examples of Work at Different Intensity Levels

Moderate work:

- Jack-leg drilling
- Installing ground support
- Loading explosives
- Carrying equipment/supplies weighing 20-40 pounds
- Using hand tools (shovel, fin-hoe, scaling bar) for short periods







Examples of Work at Different Intensity Levels

Heavy work:

- Climbing
- Carrying equipment/supplies weighing 40 pounds or more
- Installing utilities
- Using hand tools (shovel, fin-hoe, scaling bar) for extended periods







Knowledge Check

Work/Rest schedules are largely dependent on what factors?

- a. Metabolic work rate and temperature,
- b. Humidity and temperature
- c. Temperature, clothing and humidity
- d. Clothing, humidity and temperature

a. Metabolic work rate and temperature







Acclimatization

 Nearly 3 out of 4 heat illness fatalities happen during the first week of working in hot environments.

New and returning workers need to acclimatize.

- Follow the 20% rule:
 - Day 1, only work 20% of a shift at full intensity.
 - Increase time working at full intensity by 20% a day.

