

## What is Exposure Action Value (EAV)?

### Description

**Exposure Action Value (EAV) is a critical measure in the field of Health, Safety, and Environment (HSE), referring to a daily or weekly average noise level threshold, or peak sound pressure. The legislation defines two EAVs, one each for Hand-Arm Vibration (HAV) and Whole Body Vibration (WBV).**

## In-depth Understanding of Exposure Action Value (EAV)

The concept of Exposure Action Value (EAV) is an integral part of occupational safety and health regulations. It is a measure used to assess the level of exposure to certain physical factors in the workplace, such as noise and vibration. The EAV is a threshold value, and if regular exposure is at or above the EAV, employers are required to implement a program of controls to eliminate or reduce exposure.

### Hand-Arm Vibration (HAV)

Hand-Arm Vibration (HAV) refers to the vibrations that employees are exposed to through their hands and arms when using machinery, equipment, or tools. This type of vibration is common in industries such as construction, mining, forestry, and manufacturing where power tools are frequently used.

Prolonged exposure to HAV can lead to various health issues, including Hand-Arm Vibration Syndrome (HAVS), a condition characterized by symptoms such as tingling and numbness in the fingers, loss of strength in the hands, and in severe cases, the loss of fingers. HAVS is preventable, but once the damage is done, it is permanent.

The EAV for HAV is a daily exposure action value of  $2.5 \text{ m/s}^2 \text{ A}(8)$ , which represents a level of vibration exposure above which employers are required to take action to control exposure. The actions required include the provision of information and training to employees about risks and effects of vibration, measures to minimize vibration exposure, and health surveillance.

### Whole Body Vibration (WBV)

Whole Body Vibration (WBV) is the vibration that is transmitted through the seat or feet of employees who drive mobile machines, vehicles, or other work equipment. Occupations that may be exposed to WBV include truck drivers, helicopter pilots, tractor drivers, forklift operators, and operators of earth-moving equipment.

Long-term exposure to WBV can lead to debilitating health conditions affecting the lower back, known as "vibration white foot" or "dead foot," a condition similar to hand-arm vibration syndrome. It can also cause severe back pain, damage to the spine, and disorders of the digestive system.

The EAV for WBV is a daily exposure action value of  $0.5 \text{ m/s}^2 \text{ A}(8)$  for health and  $1.15 \text{ m/s}^2 \text{ A}(8)$  for safety. As with HAV, if the EAV for WBV is exceeded, employers must take action to reduce exposure. This can include providing appropriate training, reducing exposure duration, and providing regular health surveillance.

## The Importance of Adhering to EAVs

Understanding and adhering to the EAVs is crucial in maintaining a safe and healthy work environment. By monitoring and controlling the levels of noise and vibration to which employees are exposed, employers can prevent long-term health issues, improve productivity, and ensure compliance with health and safety regulations.

Moreover, by implementing a robust program of controls, employers can demonstrate their commitment to employee welfare, which can enhance their reputation, improve employee morale, and reduce the risk of litigation.

### CATEGORY

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7. Forklift
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18. Whole Body Vibration (WBV)

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