

3M Taiwan  
Occupational Health & Environmental Safety PPES, D&ES

## 個人防護具之種類與選用



聽力防護具介紹

職業安全衛生與環保部門  
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## 聲音的量測

聲音 ( Sound ) 與噪音 ( Noise ) 音波表示  
頻率 ( FREQUENCY ) 與強度 ( INTENSITY )



- 頻率代表在每一秒鐘內產生聲音音波的數量，量測單位為赫茲 ( Hertz, Hz )
- 強度代表音波的音壓值，量測單位為分貝 ( Decibels, dB )




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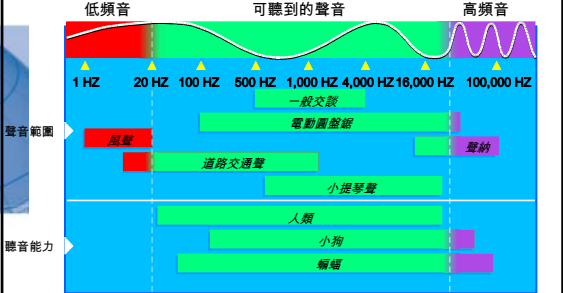
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## 聲音與噪音




低頻音      可聽到的聲音      高頻音

1 HZ   20 HZ   100 HZ   500 HZ   1,000 HZ   4,000 HZ   16,000 HZ   100,000 HZ

聲音範圍

聽音能力




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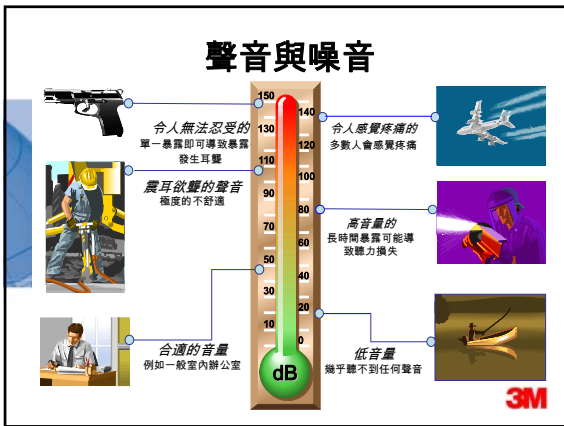
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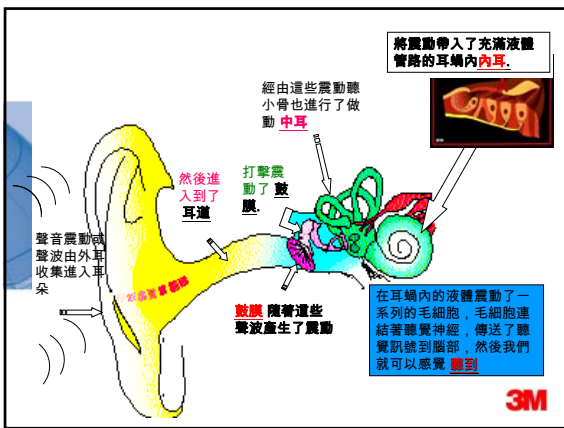
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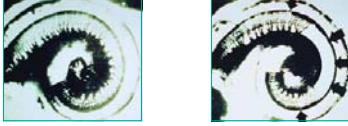
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## 個人聽力能力

### 噪音誘發的個人聽力損失

過度暴露於高噪音值下導致耳蝸內聽力細胞發生永久性損傷



例如：路是人走出來的，人們在綠地上重複來回，造成小草死亡。就如同耳蝸內聽力細胞不斷重複暴露在噪音下，導致細胞死亡，發生聽力損失。



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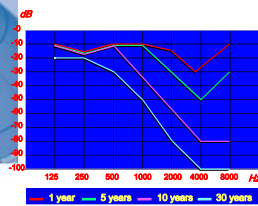
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## 個人聽力能力

### 聽力損失



### 可能發生

MY OFFICE IS ON THE TWELFTH FLOOR

becomes ...

m FFI is o HE twe FL I OOR

then ...

FF c s TH t TH f

and finally ...

NY OIBEWELOOR

典型持續性永久聽力損失模式

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## 法規要求

### 勞工安全衛生法規、勞工安全衛生設施規則與勞工健康保護規則

- 噪音作業係指作業場所噪音值 > 85 dB(A) (8-hour basis)

- 必須執行聽力保護計畫
- 儀器設備工程改善
- 聽力防護具使用
- 聽力防護具安全衛生教育訓練

- 噪音等級

- 九十分貝時，勞工噪音暴露工作日八小時日時量平均
- 任何時間不得暴露於峰值超過一百四十分貝之衝擊性噪音
- 一百十五分貝之連續性噪音

對於勞工八小時日時量平均音壓級超過八十五分貝或暴露劑量超過百分之五十時，雇主應使勞工戴用有效之耳塞、耳罩等防音防護具

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## 聽力防護具的種類

- 耳塞
  - 拋棄式 (泡棉材質)
  - 可重複使用
- 頭帶式耳塞
- 耳罩
  - 一般耳罩
  - 特殊型耳罩 (主動噪音控制)



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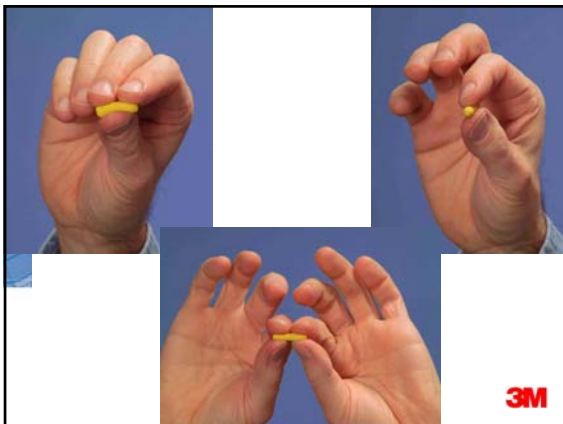
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拉起耳廓可有效  
幫助配戴正確



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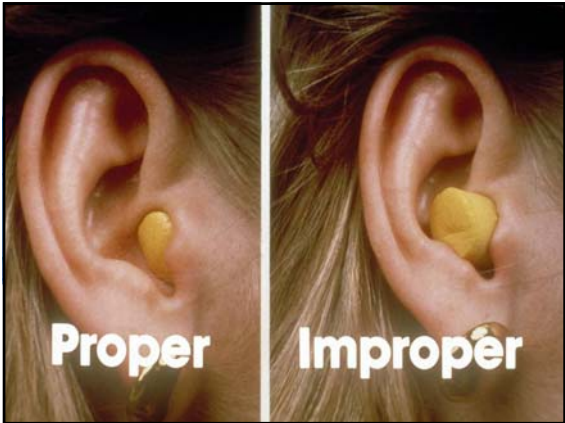
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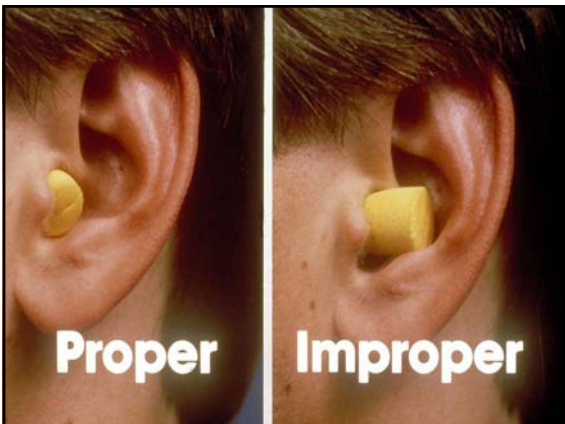
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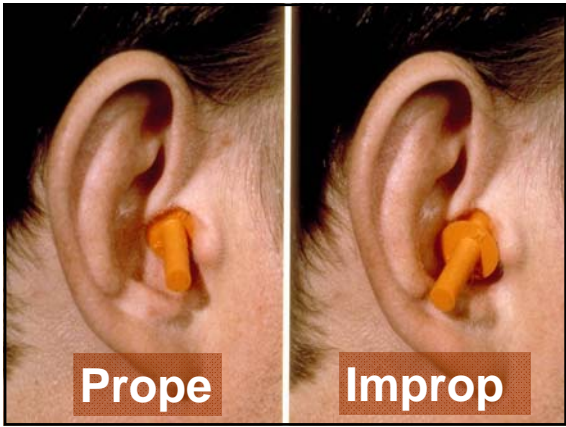
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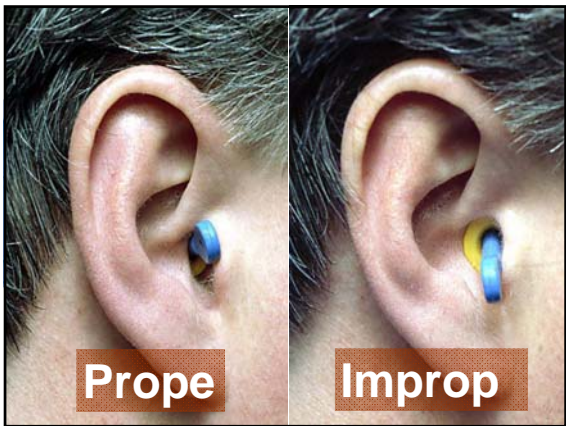
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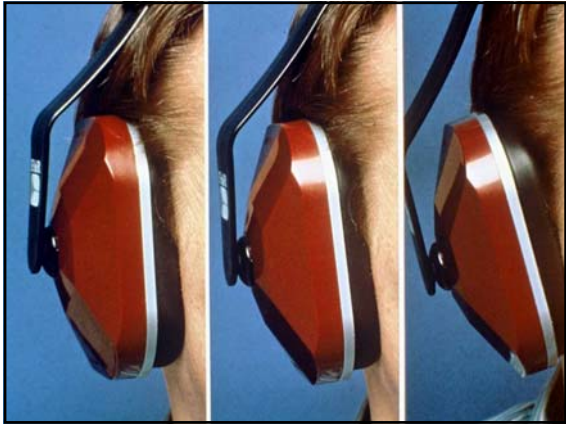
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目視檢查 - 頭帶張力縮減了 20%



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***Thank You!***

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