



# ASGE guideline on the role of ergonomics for preventions of endoscopy-related injury (ERI)

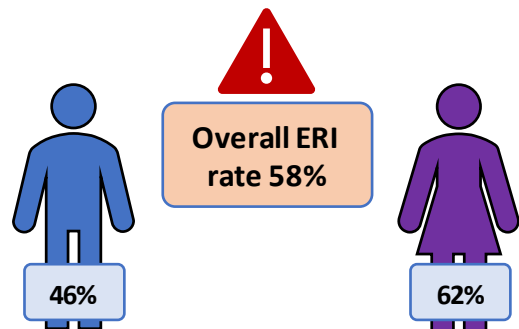
By: Abubaker Abdalla, M.D.

## Finding 1: Endoscopist report high rates of ERI

- Overall rate of ERI of 57.7%
- Most common sites of ERIs are fingers, back and neck

## Finding 2: Female endoscopists are at higher risk of ERI compared to male endoscopists

- Overall rate of ERI in females is 62.4% compared to 45.5% in males



## Finding 3: Greater exposure to endoscopy procedure is associated with higher rates of ERIs

- Number of hours performing endoscopy and years in practice are independent predictors of ERI

## Recommendation 1: Ergonomics education

- Ergonomics education (online courses, in-person teaching and physical therapy consultation) is associated with improvement in ergonomics assessment scores

## Recommendation 3: Neutral monitor position

- Monitors should be placed directly in front of endoscopists
- Optimal viewing angle: **15-25° below eye level**
- Optimal viewing distance: **52-182 cm from eyes**
- Monitors should be adjustable 93-162 cm above the floor
- *Surgical literature showed improved neck strain with neutral monitor position*

## Recommendation 4: Neutral bed height

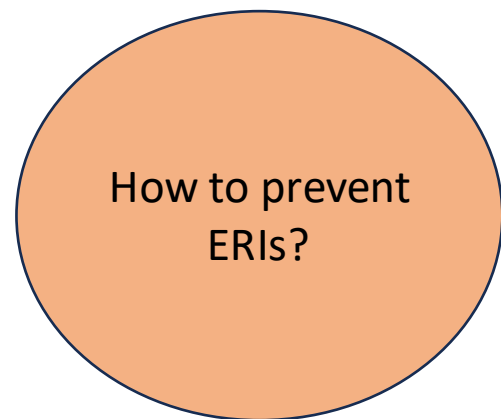
- Optimal bed height: hold the scope between **elbow height and 10 cm below elbow**
- Examination table height should be adjustable from 85-120 cm.
- *Surgical literature reported improvement in overall discomfort with neutral bed position*

## Recommendation 5: Anti-fatigue mats

- Floor mats are inexpensive and are associated with reduced pain and discomfort.
- *Surgical studies involving urologic procedures noted improvement in overall discomfort, feet, knees and back pain with anti-fatigue mats*

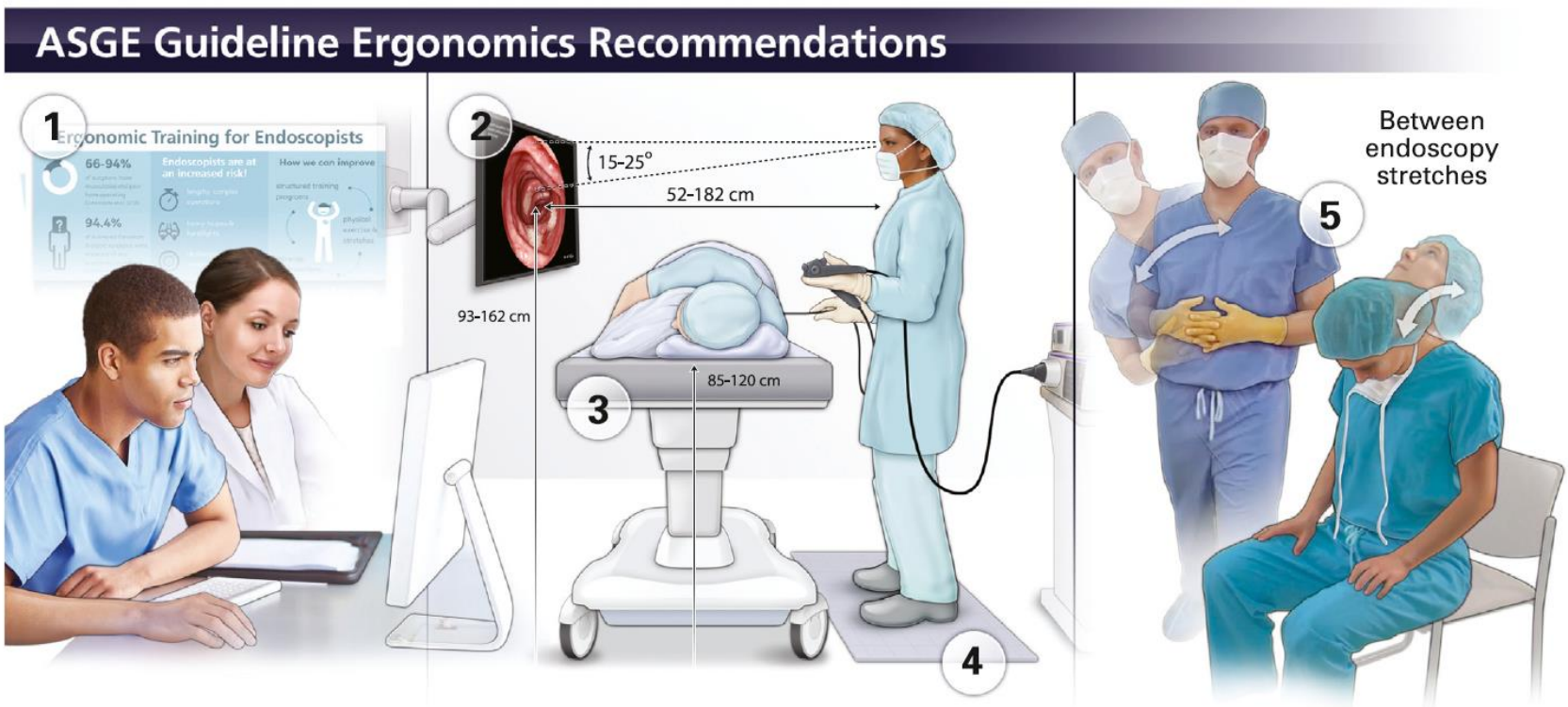
## Recommendation 2: Microbreaks and scheduling macrobreaks

- Targeted stretching microbreaks (TSMBs): 1-2 minutes stretching breaks every 20-40 minutes
- Macrobreaks: 15-45 minutes scheduled breaks
- Both are associated with lower odds of ERI



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- 1 The ASGE recommends ergonomic education to reduce the risk of ERI. (Strong recommendation, low quality of evidence).
- 2 The ASGE recommends a neutral monitor position during endoscopies to reduce the risk of ERI. (Strong recommendation, low quality of evidence).
- 3 The ASGE recommends the use of neutral bed height to reduce the risk of ERI. (Strong recommendation, very low quality of evidence).
- 4 The ASGE suggests the use of anti-fatigue mats to reduce the risk of ERI. (Conditional recommendation, very low quality of evidence).
- 5 The ASGE suggests that GI endoscopists take micro breaks and scheduled macro breaks to reduce the risk of ERI. (Conditional recommendation, very low quality of evidence).