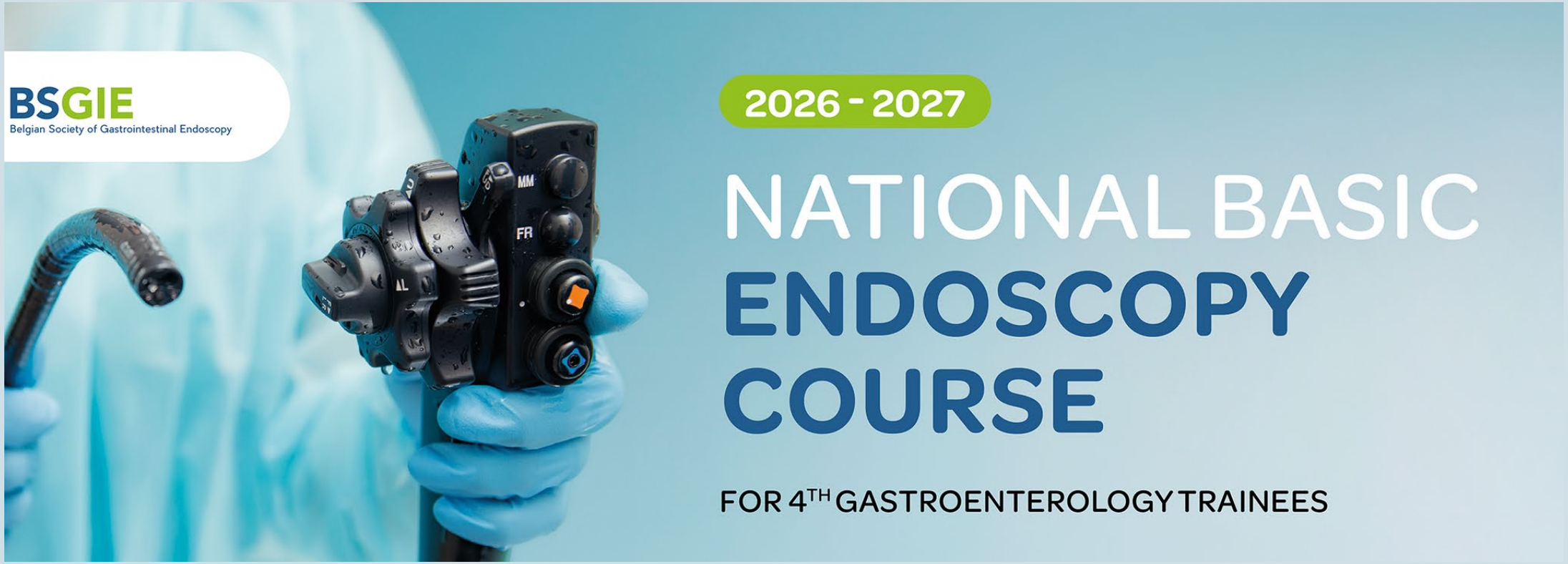


Handling the endoscope: basic principles

ZEEVAERT Jean- Baptiste

Introduction

1) Goal of perfect handeling ?

2) Wich tehnique of handeling is the best

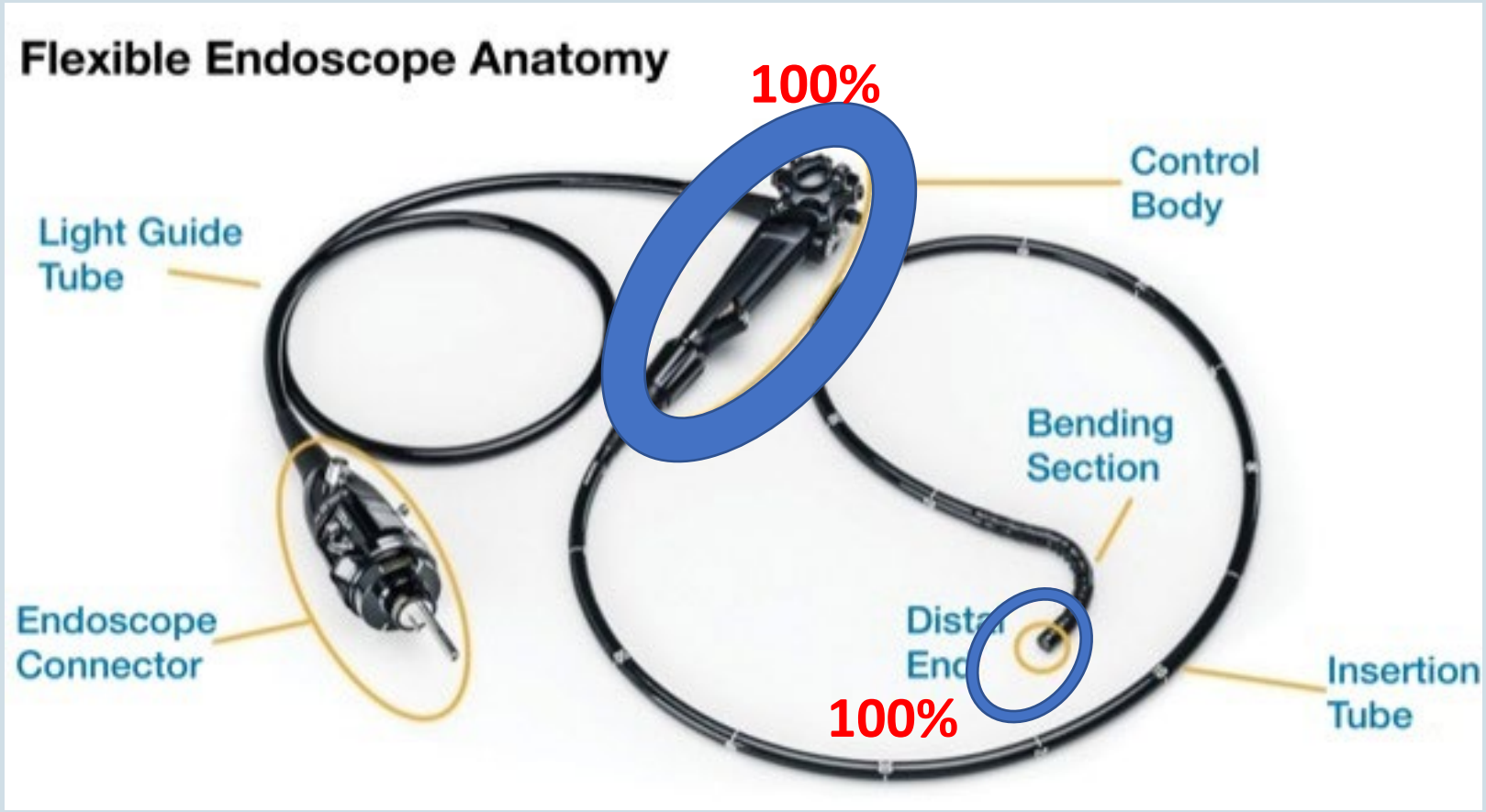
Manipulation : basic principle ➔ Most importante thing in endoscopy ?

Ergonomic = Trendy or game changing ?



Introduction

1) Goal of perfect handeling ?



STABILITY !!!

Introduction

1) Goal of perfect handeling ?

2) Wich technique of handeling is the best

Manipulation : basic principle ➔ Most importante thing in endoscopy ?

Ergonomic = Trendy or game changing ?



Introduction

2) Wich technique of handeling is the best

NO PERFECT POSITION

Introduction

2) Wich technique of handeling is the best

Différente position ! Relax and free your the thumb
1 or 2 finger ?
1 finger = bloc the big wheel but dificulte and can injured

PHOTOS !


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Classique RELAX POSITION
- 1 OR 2 FINGER /


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GIF-1100

OPEN AND RELAX / 2 FINGERS



OPEN AND RELAX / 1 FINGERS



Introduction

2) Wich technique of handeling is the best

Conclusion : find your own ➔ OPEN AND RELAX
What is your purpose ?

Introduction

Manipulation : basic principle ➔ Most importante thing in endoscopy ?

Understand the movement = accuracy + stability

➔ Improved quality and confidence



Intr

Manipulation

UP DOWN = Big wheel

(RIGHT LEFT = Little wheel)

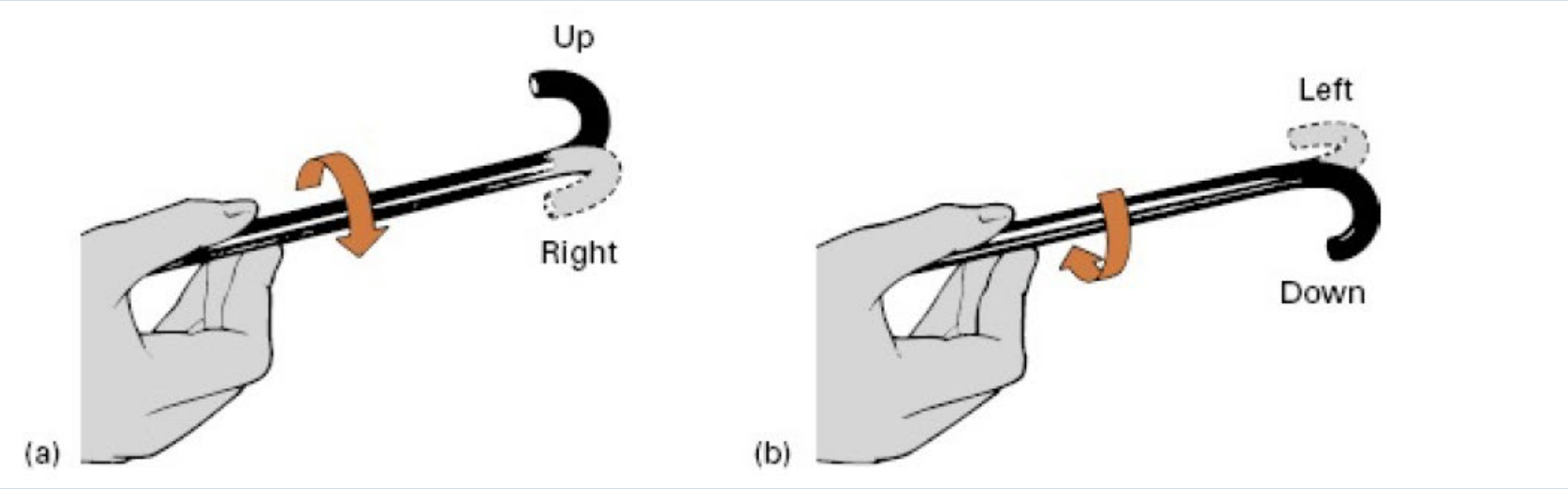


Introduction

Manipulation

<u>Rotation</u> = Start with you left hand. No rotation with your right hand ➔

loosing stability



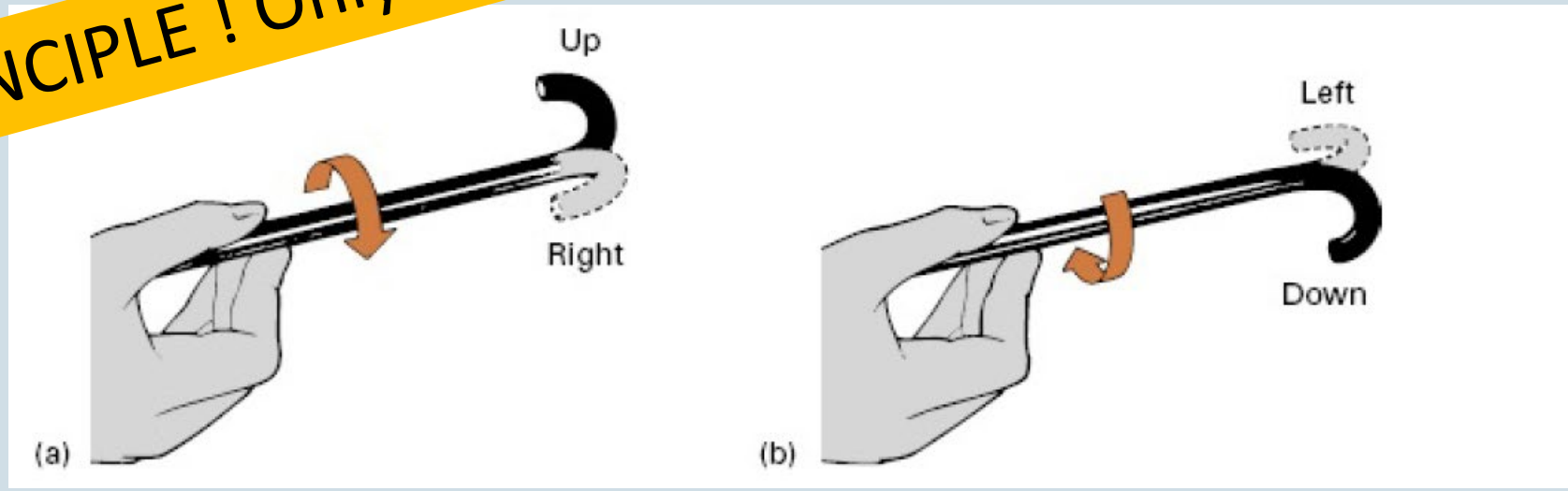
Introduction

Manipulation

<u>Rotation</u> = Start with you left hand … your right hand ➔

BIG PRINCIPLE ! Only AXIS rotation give movement !!!

loosing stability



Introduction

Manipulation

Rotation = Start with you left hand. No rotation with your

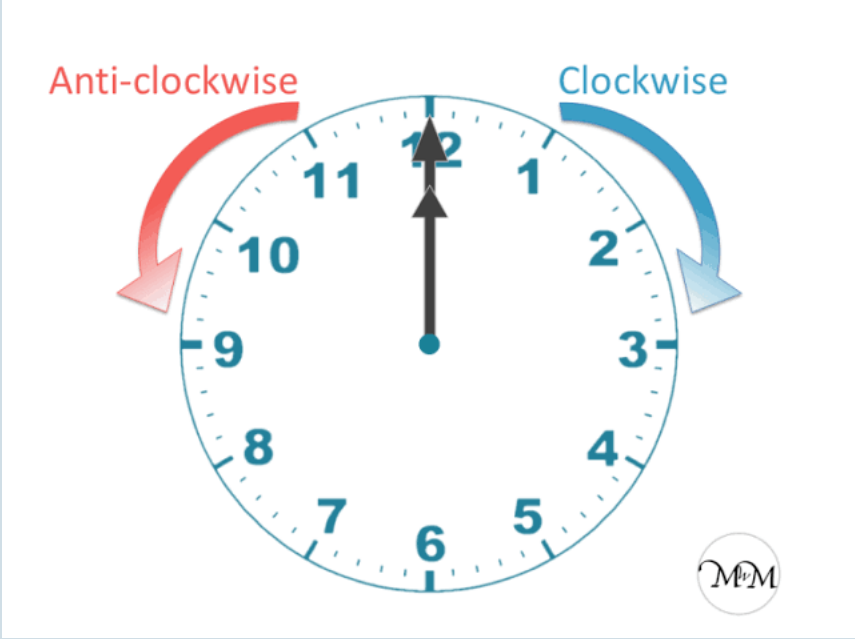


Introduction

Rotation = Start with you left hand. No rotation with your right hand ➔

loosing stability



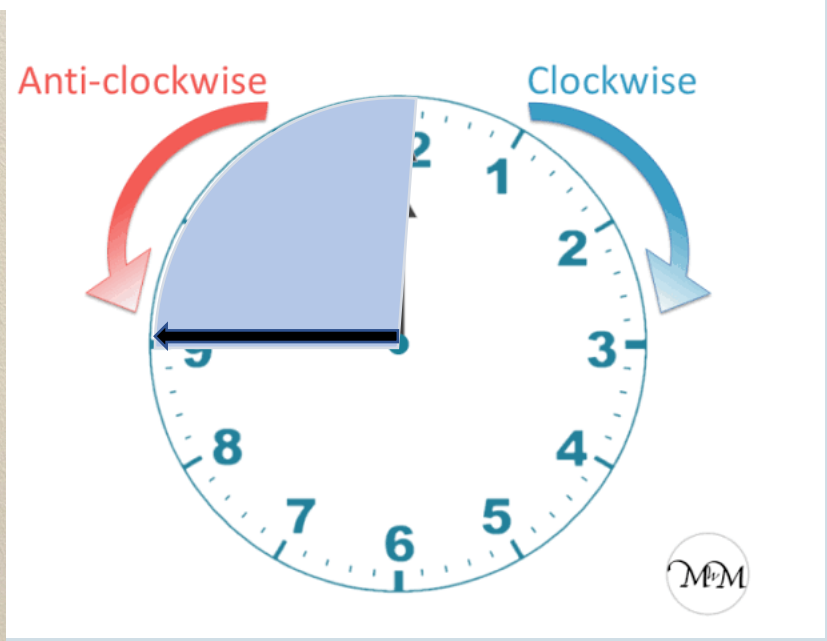


Introduction

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loosing stability





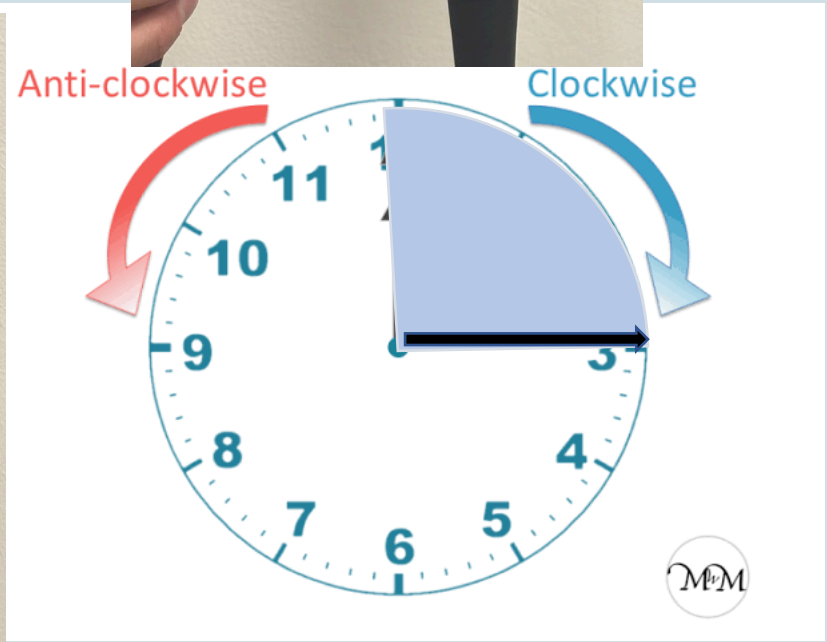
ction

<u>Rotation</u> = Start with you ion with your right hand ➔

loosing stability







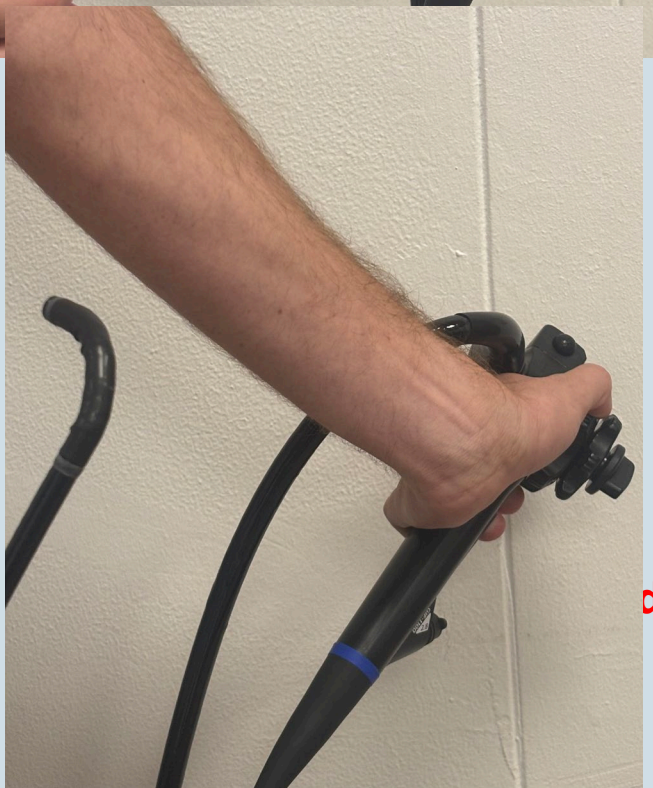




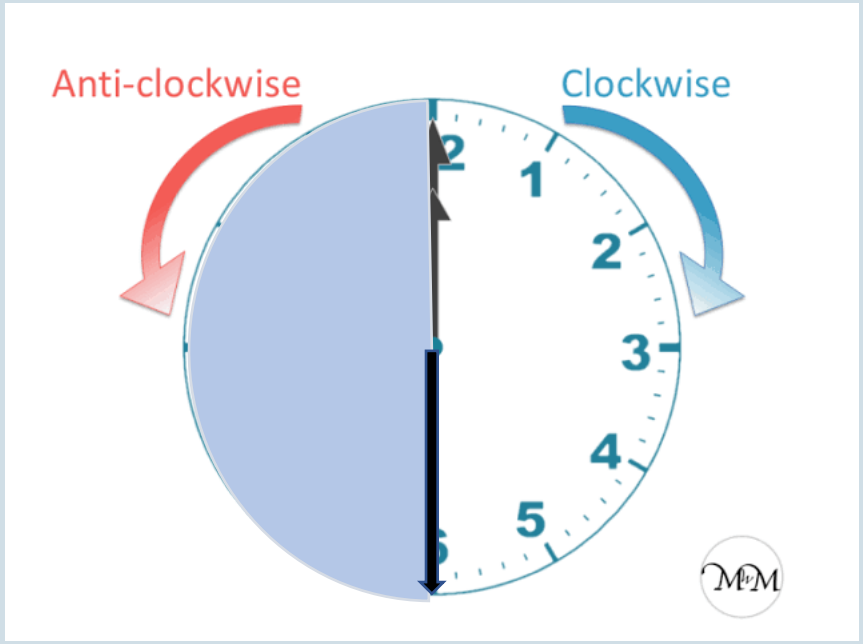
Introduction

n you left hand. No rotation with your right hand ➔

loosing stability



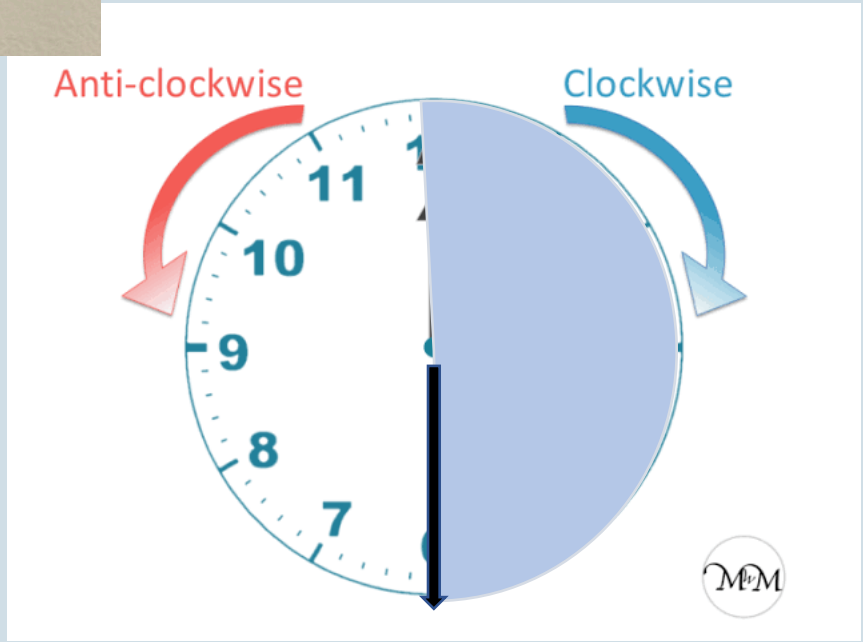
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90° = Open Wirst

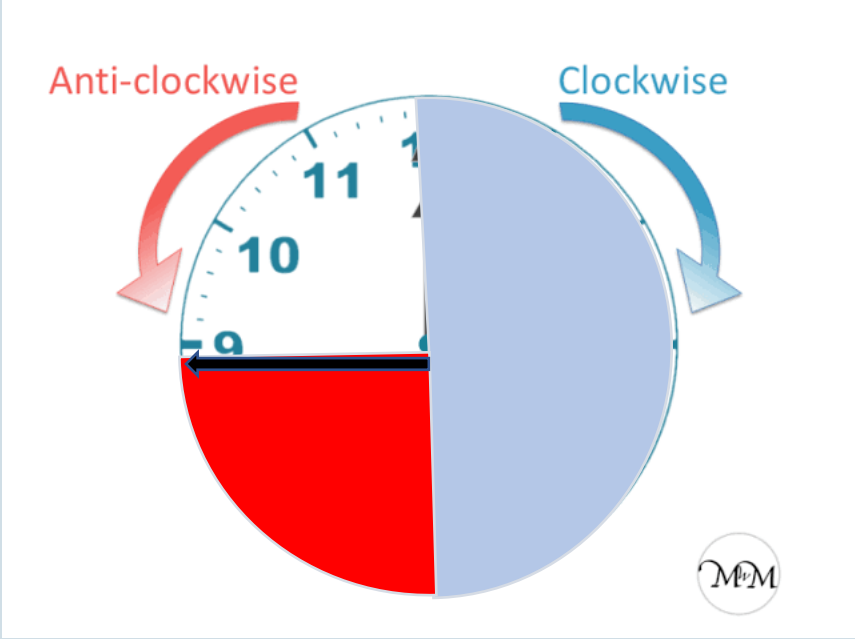
+ stretch the arm backward

= 180°

Introduction

<u>Rotation</u> = Start with you left hand. No rotation with your right hand ➔

loosing stability



90° = Open Wirst
+ stretch the arm backward

= 180°

90° = closed wirst
+rotate the elbow around the endoscope's axis

=180°
Move your body = Look to the second screen + 90°

Introduction

Manipulation :

Role of right hand ?

$\Rightarrow$ Push and pull the scope !!!

$\Rightarrow$ **!!! Be available for the working chanel !**

Introduction

How can I improve my accuracy?

to work with support :

1) Support of the scope (endoscopic bite block.)

2) Support of you instrument on the working channel

3) Work close !!

Introduction

How can I improve my accuracy?

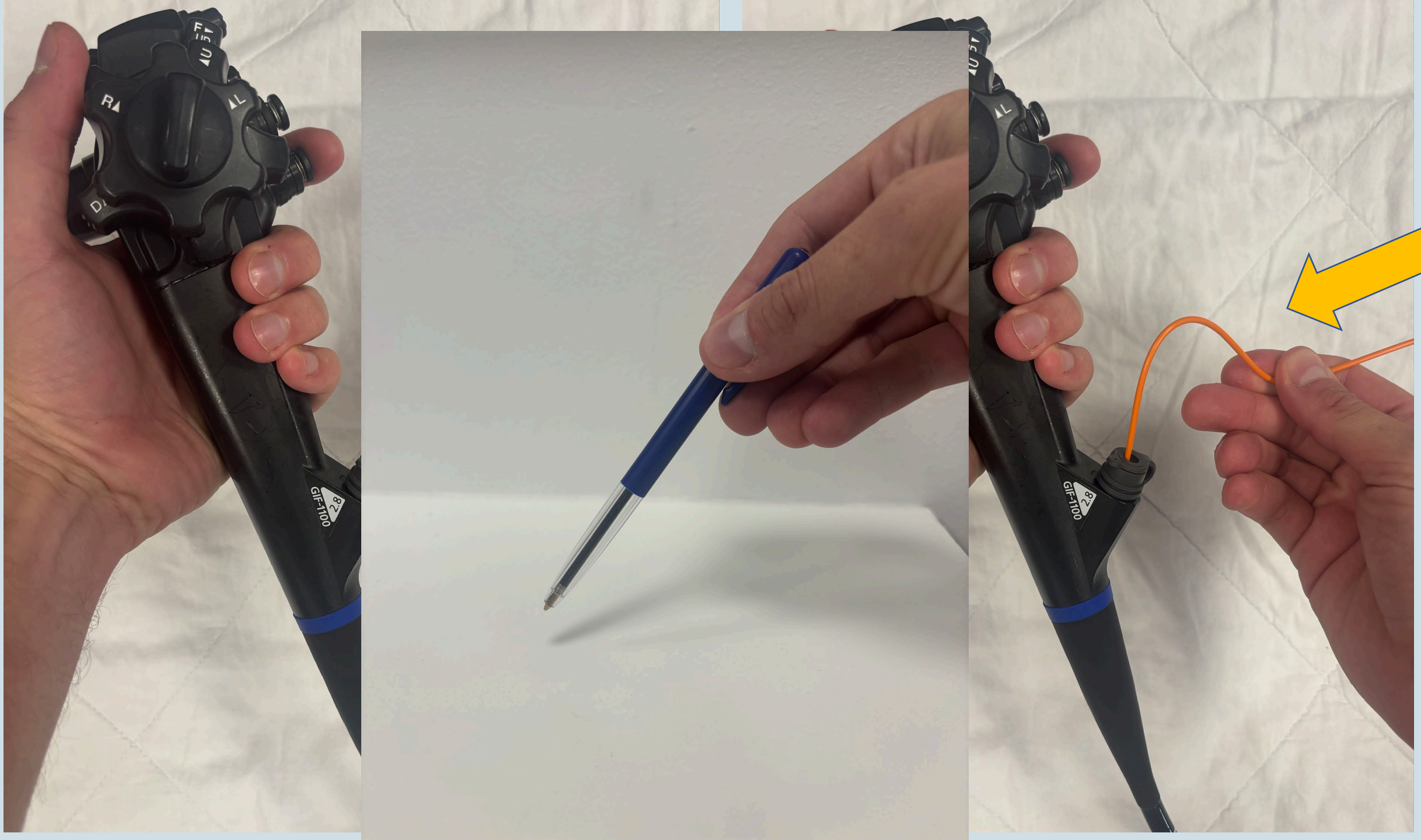
1) Work with support :

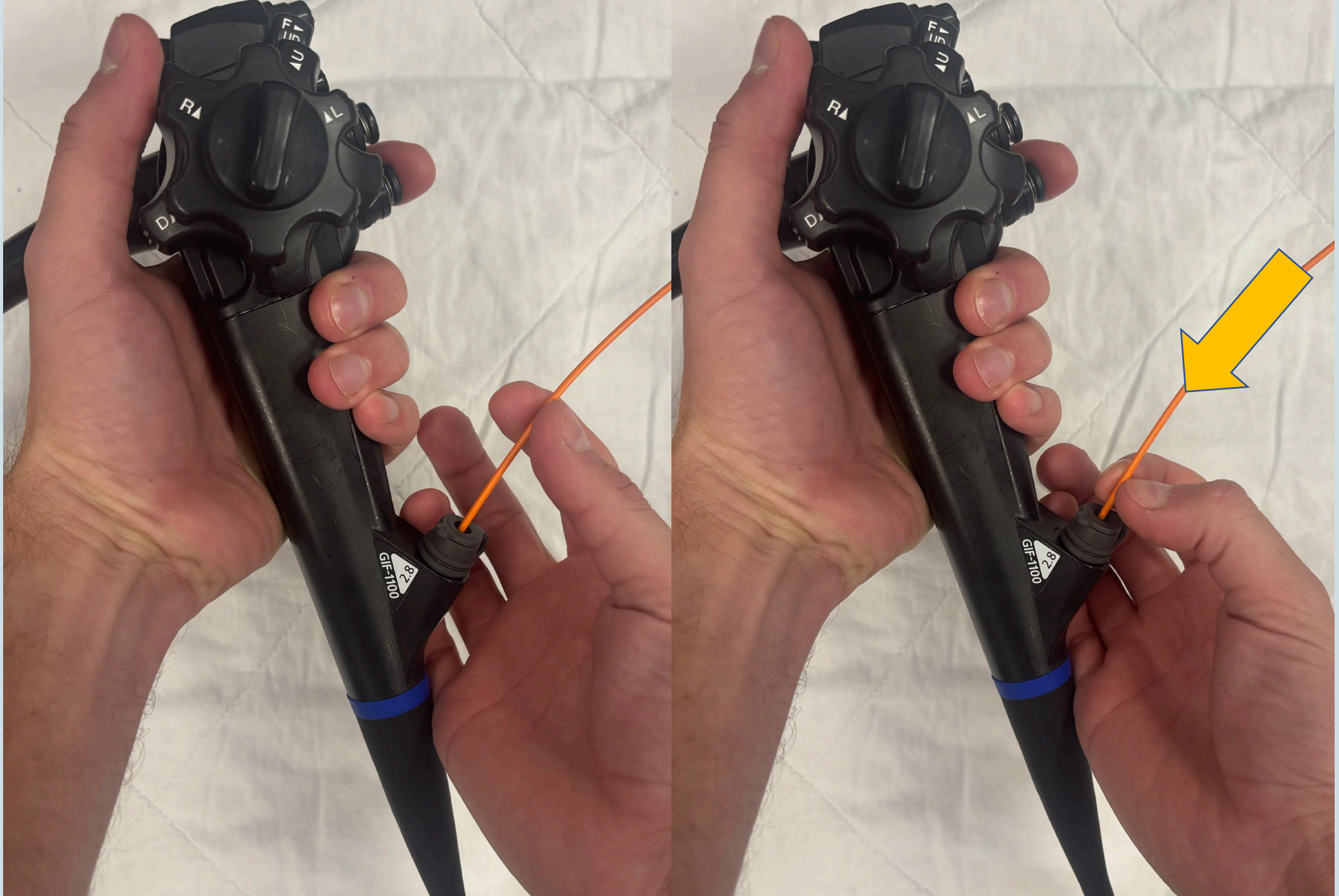
Support of the scope (endoscopic bite block.)

Support of your instrument on the working channel

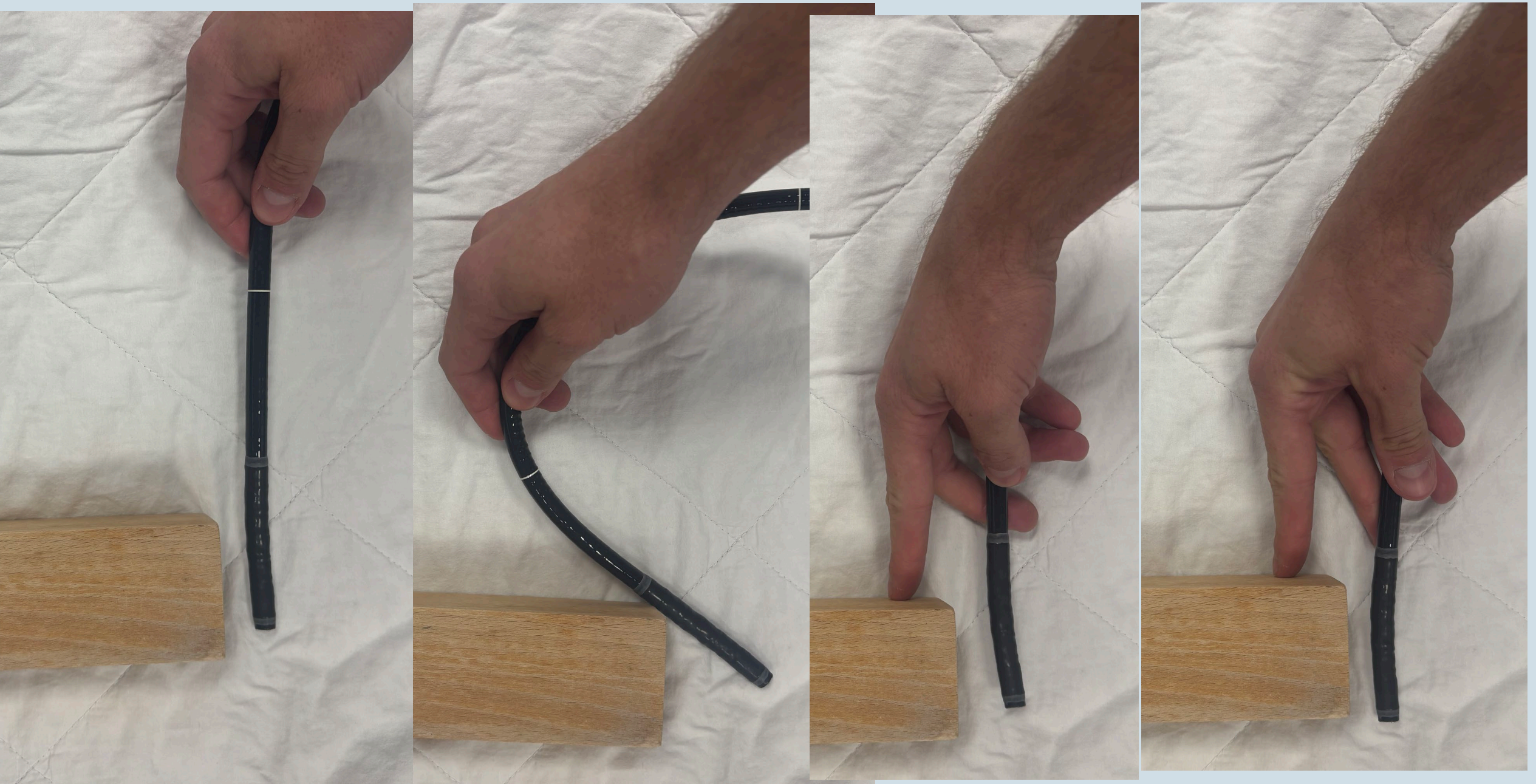

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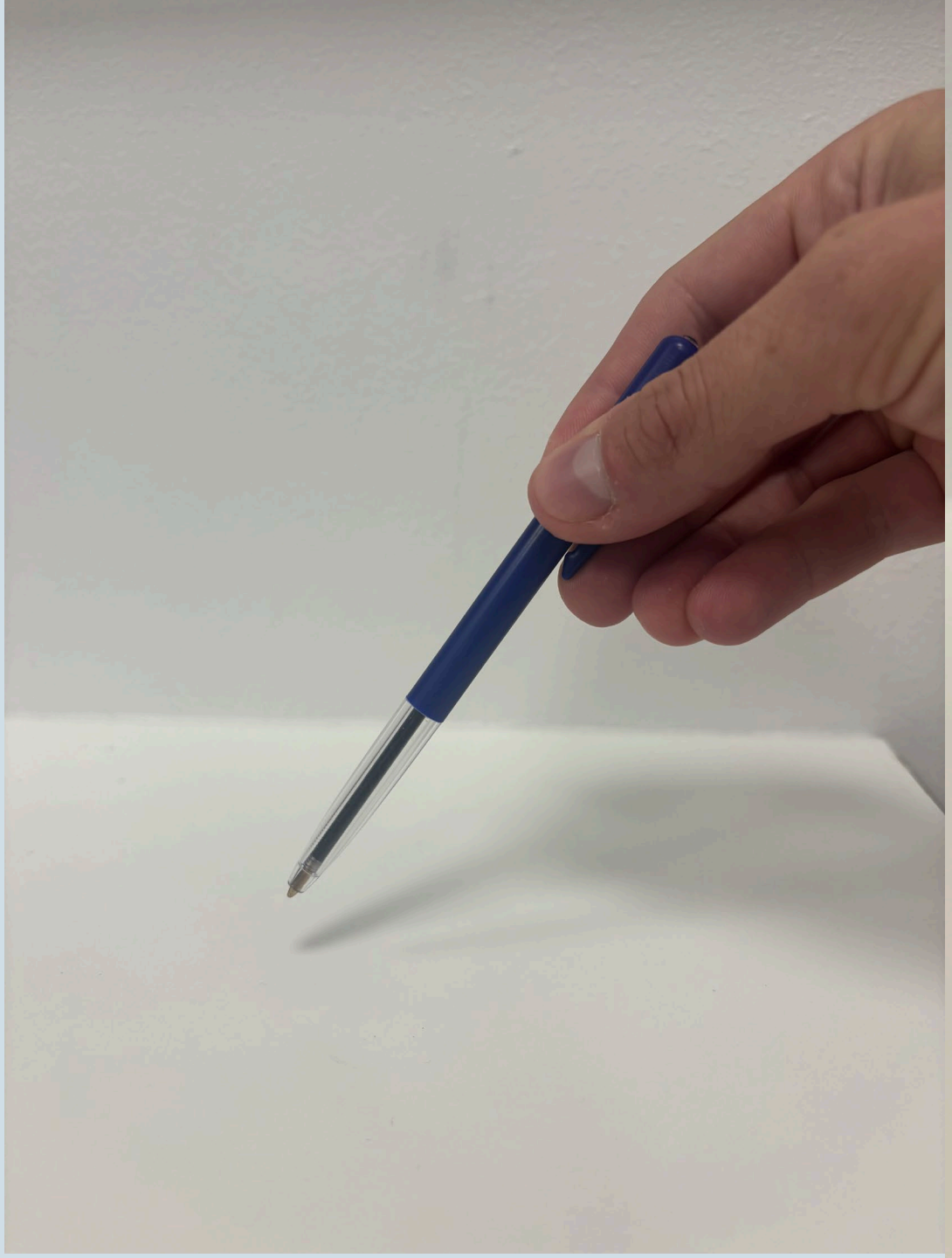

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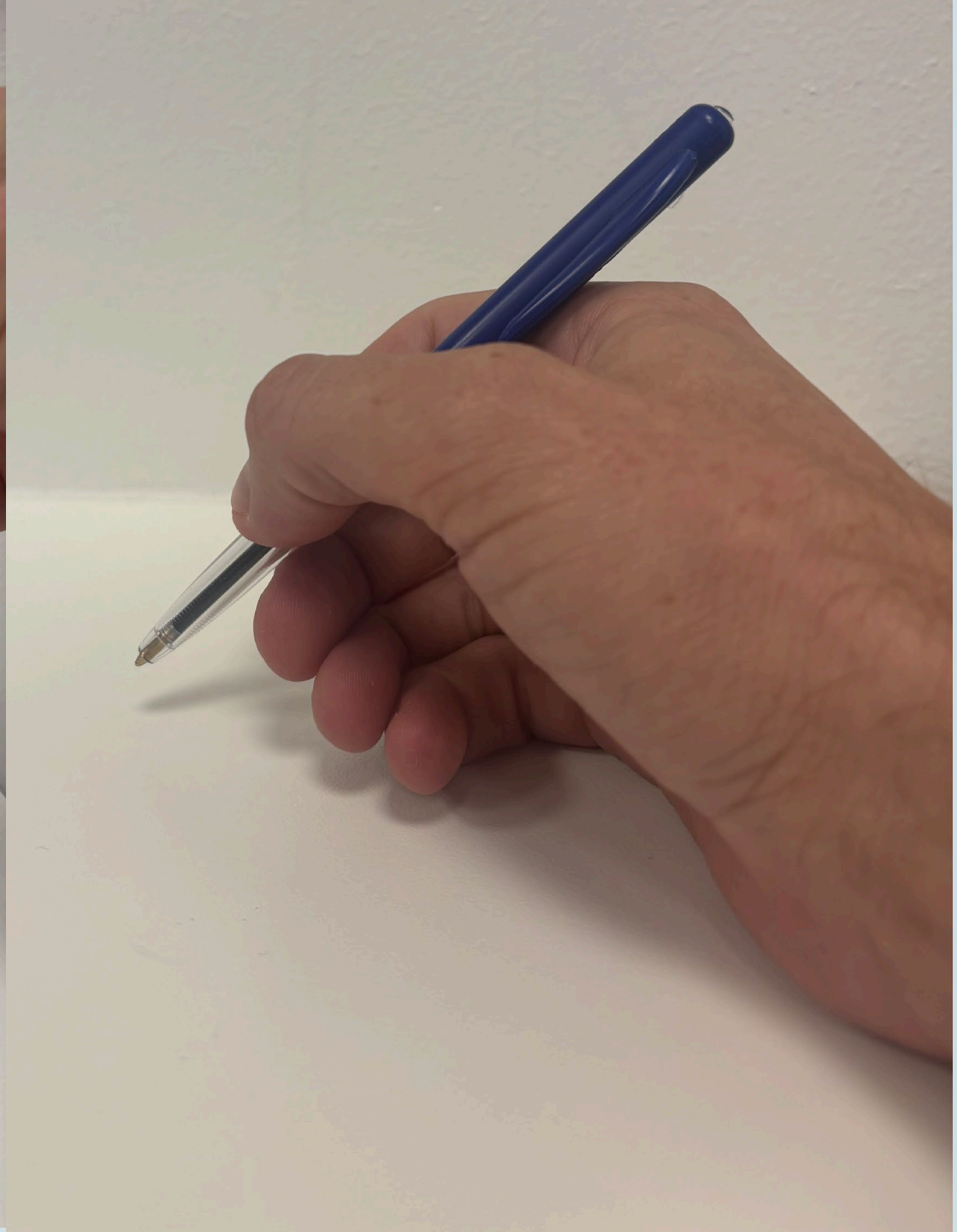

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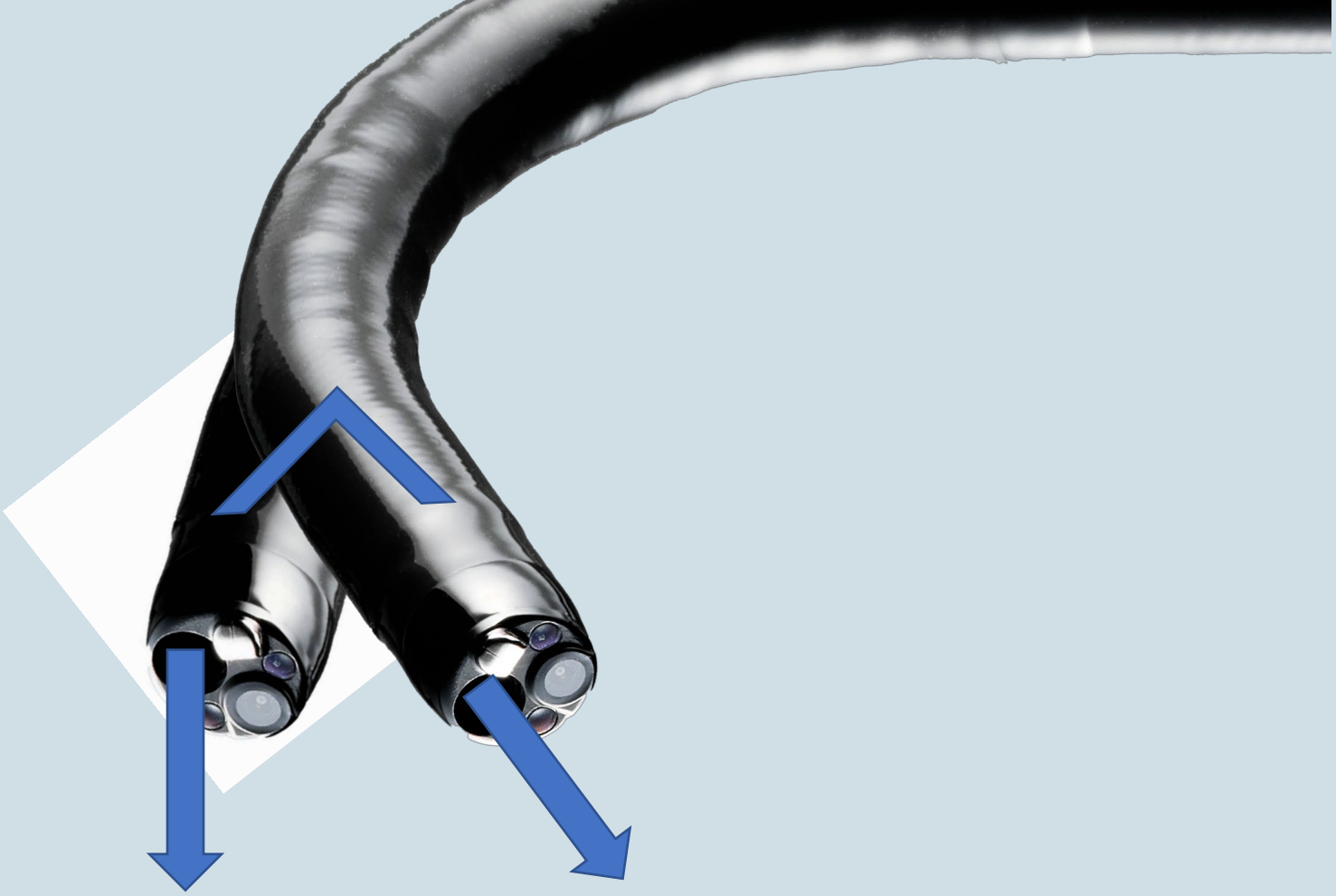
Introduction

How can I improve my accuracy?

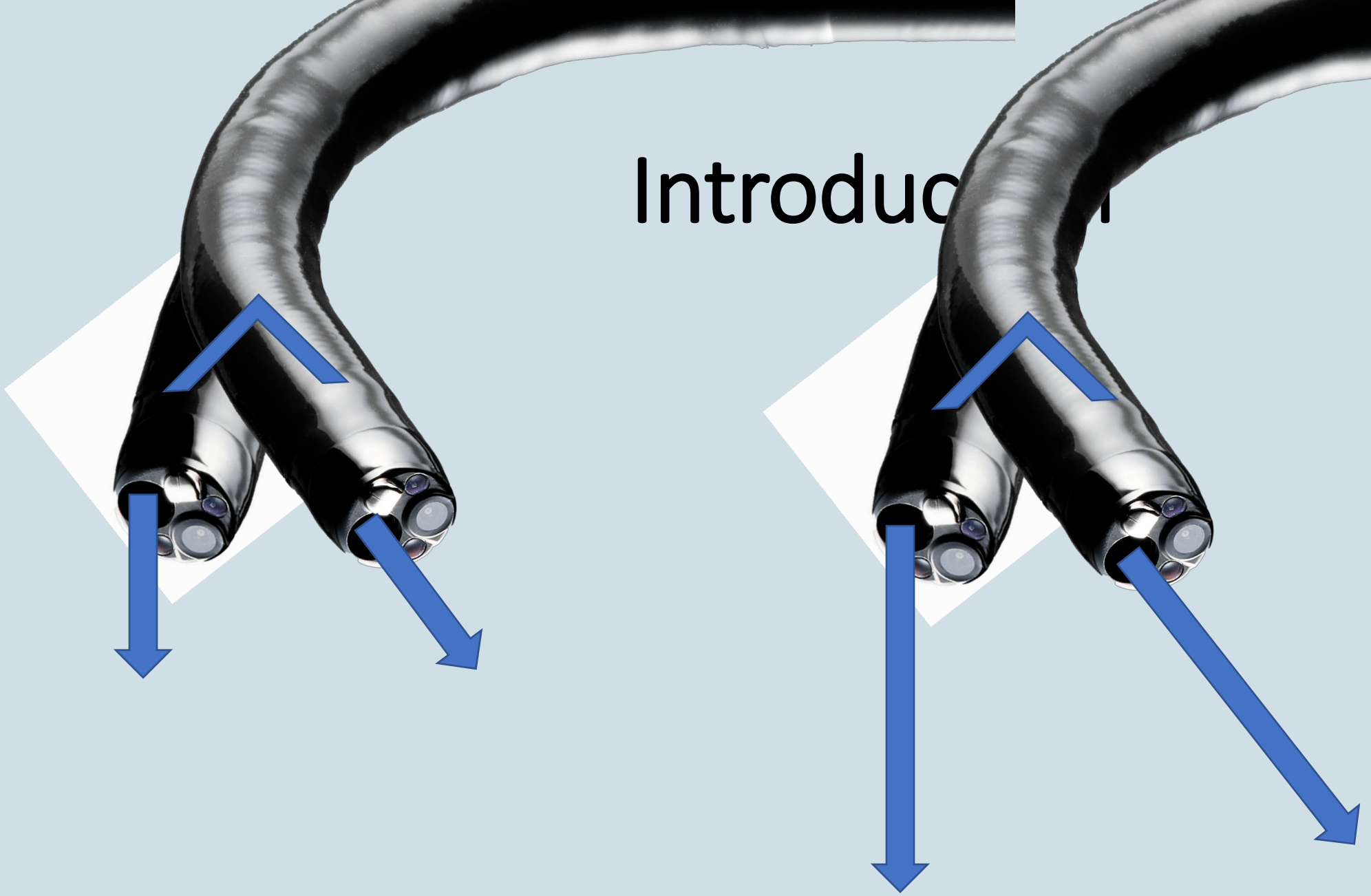
1) Work with support :

- **Support of the scope (**endoscopic bite block.)
- **Support of your instrument on the working channel**

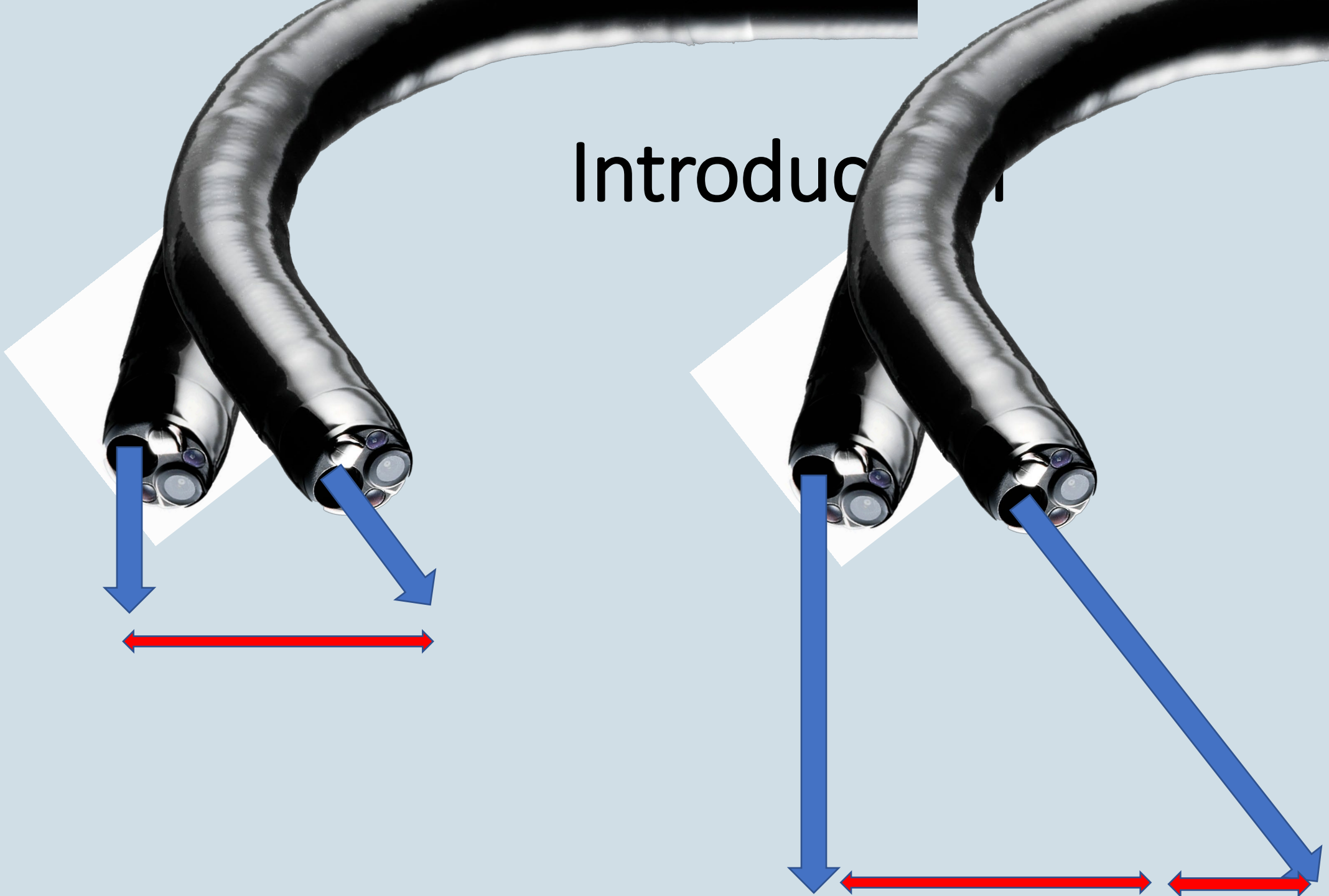
2) Work close !!



Introduc



Introduc



Ergonomic = Trendy or game changing ?

Prévalence cumulée au cours de la carrière, méta-analyse de 2025



Source : Oliveira et al., 2025. Prévalence cumulée sur la carrière, et non risque annuel. Les mêmes personnes peuvent présenter plusieurs symptômes. Wiley Online Li...

La méta-analyse de 2024 porta[illegible] 6 24[illegible]oscopistes rapporte, quant à elle, une prévalence globale des blessures liées à l'endosco[illegible] de **67,9 %**[illegible]s douleurs cervicales arrivent en tête (36,7 %), suivies des douleurs lombaires (35,6 %) [illegible]eurs du pouce (33,1 %). Les pourcentages diffèrent de ceux de 2025 en raison des études, des définitions et des méthodes de regroupement utilisées. ScienceDirect

Introduction

Ergonomic = Trendy or game changing ?

Review

Work-Related Musculoskeletal Injury Rates, Risk Factors, and Ergonomics in Different Endoscopic Specialties: A Review

Veronica Bessone [1,*], Daniel B. Roppenecker [1] and Sven Adamsen [2,3]

American Society for Gastrointestinal Endoscopy guideline on the role of ergonomics for prevention of endoscopy-related injury: summary and recommendations

Introduction

Ergonomic = **Game changing !!!**

Endoscopy ergonomics: 6 recommendations

Based on ASGE guidance (2023)

01 Formal ergonomics training

Build ergonomic education into onboarding, simulation and ongoing practice.

02 Neutral posture

Keep neck and back neutral; relax shoulders; distribute weight evenly and avoid locked knees.

03 Monitor position

Place the primary screen directly in front of you at a comfortable, neutral viewing angle.

04 Bed / table height

Adjust the bed so the arms and wrists remain comfortable without shoulder elevation or trunk flexion.

05 Hand and wrist

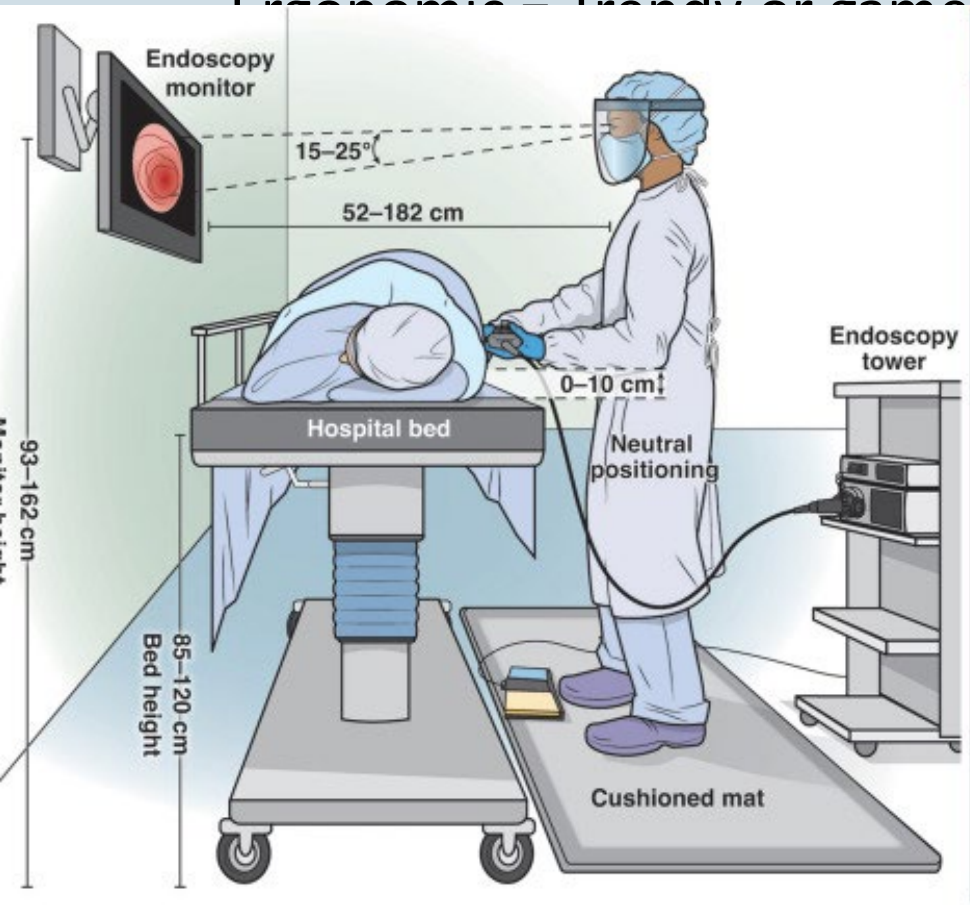
Use a relaxed, non-forceful grip; keep wrists near neutral and avoid sustained pinch or excessive thumb strain.

06 Recovery breaks

Take brief microbreaks when feasible and schedule longer breaks; consider an anti-fatigue mat for prolonged standing.

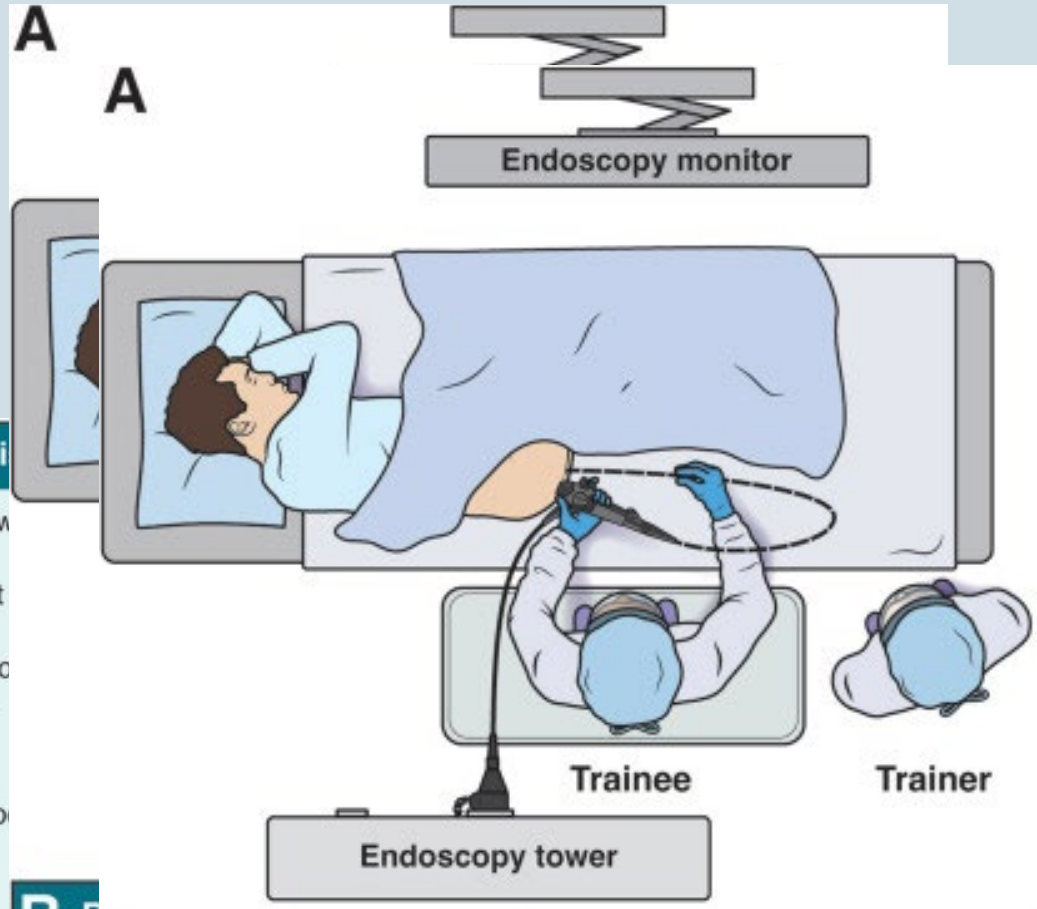
Evidence note: ASGE recommendations are strong for education and neutral monitor/table positioning, but certainty of evidence is very low; breaks and anti-fatigue mats are conditional suggestions.

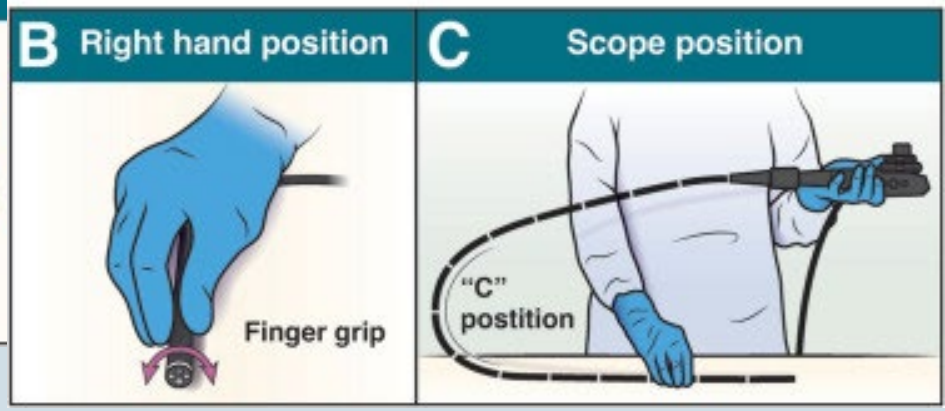
Ergonomic – Trendy or game changing ?



Pre-endoscopy ergonomic checkli

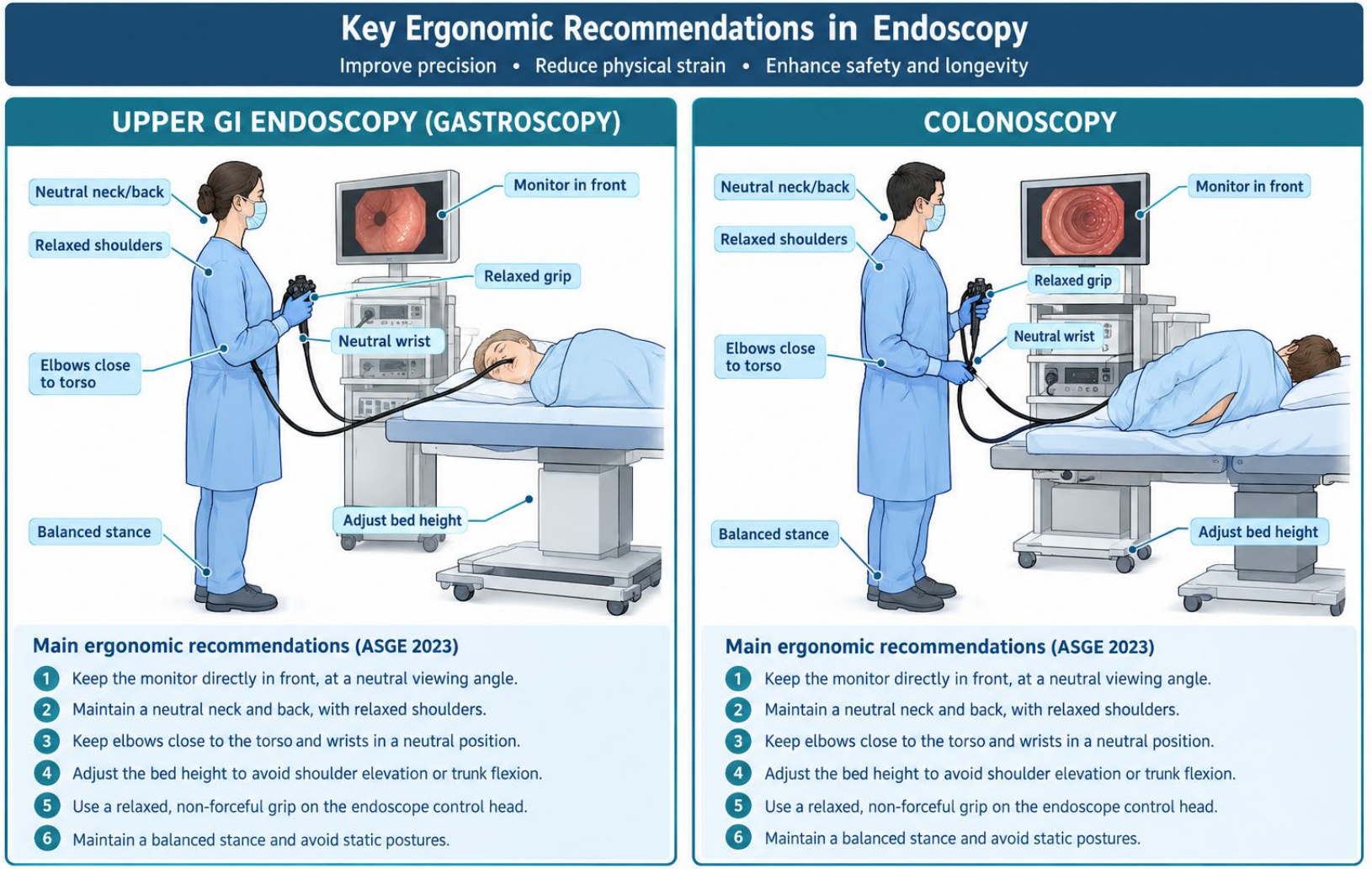
- **Monitor:** directly in front, 15–25° below eye height
- **Bed:** positioned between elbow height and 10 cm below elbow height
- **Endoscopy tower:** endoscope insertio in line with orifice to be intubated (i.e., patient's anorectum or mouth)
- **Foot pedal:** in front of body
- **Cords and wires:** contained on the flo
- **Cushioned floor mat:** in place
- **Led apron (if applicable):** 2-piece
- **Endoscopist position:** neutral posture (back, upper and lower extremities in neutral position and square to the monitor), feet hip-width apart
- **Endoscope positioning:** horizontal positioning of endoscope control head, shaft in 'C position', finger grip 15–30 c from patient's anorectum
- **Communication:** encourage team members to raise any ergonomic-relate concerns





Ergonomic setup: upper GI endoscopy vs colonoscopy

Teaching schematics — illustrative adaptations of general ergonomic principles, not official ASGE figures



Source: Pawa et al. ASGE guideline, Gastrointestinal Endoscopy 2023;98:482–491. doi:10.1016/j.gie.2023.05.056

END !

https://www.endogastrolive.com/

