



ALL-JAPAN JUDO FEDERATION “UKEMI NO SUSUME” FALL PREVENTION PROJECT

THE POTENTIAL OF KATA-BASED EXERCISE FOR FALL PREVENTION

INTERNATIONAL CONFERENCE
SAFE FALLING for the ELDERLY through **JUDO**

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PRESENTATION OUTLINE

- **ALL-JAPAN JUDO FEDERATION (AJJF) “UKEMI NO SUSUME” FALL PREVENTION PROJECT**
- **PROPRIOCEPTION AS A KEY ELEMENT FOR FALL PREVENTION**
- **KATA-BASED EXERCISE FOR FALL PREVENTION**



AJJF “UKEMI NO SUSUME” FALL PREVENTION PROJECT



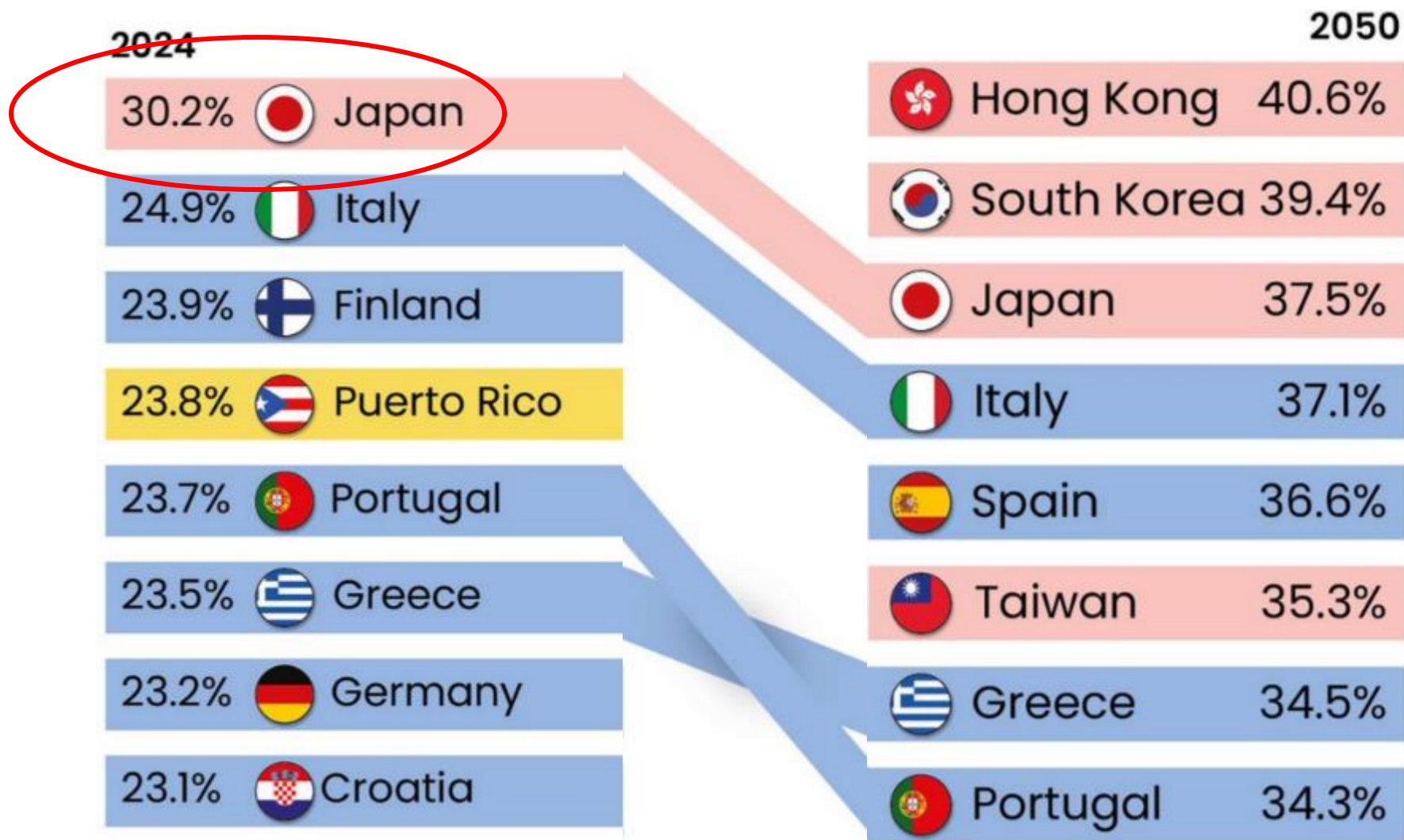
THE WORLD OLDEST POPULATIONS

Europe

Asia

Caribbean

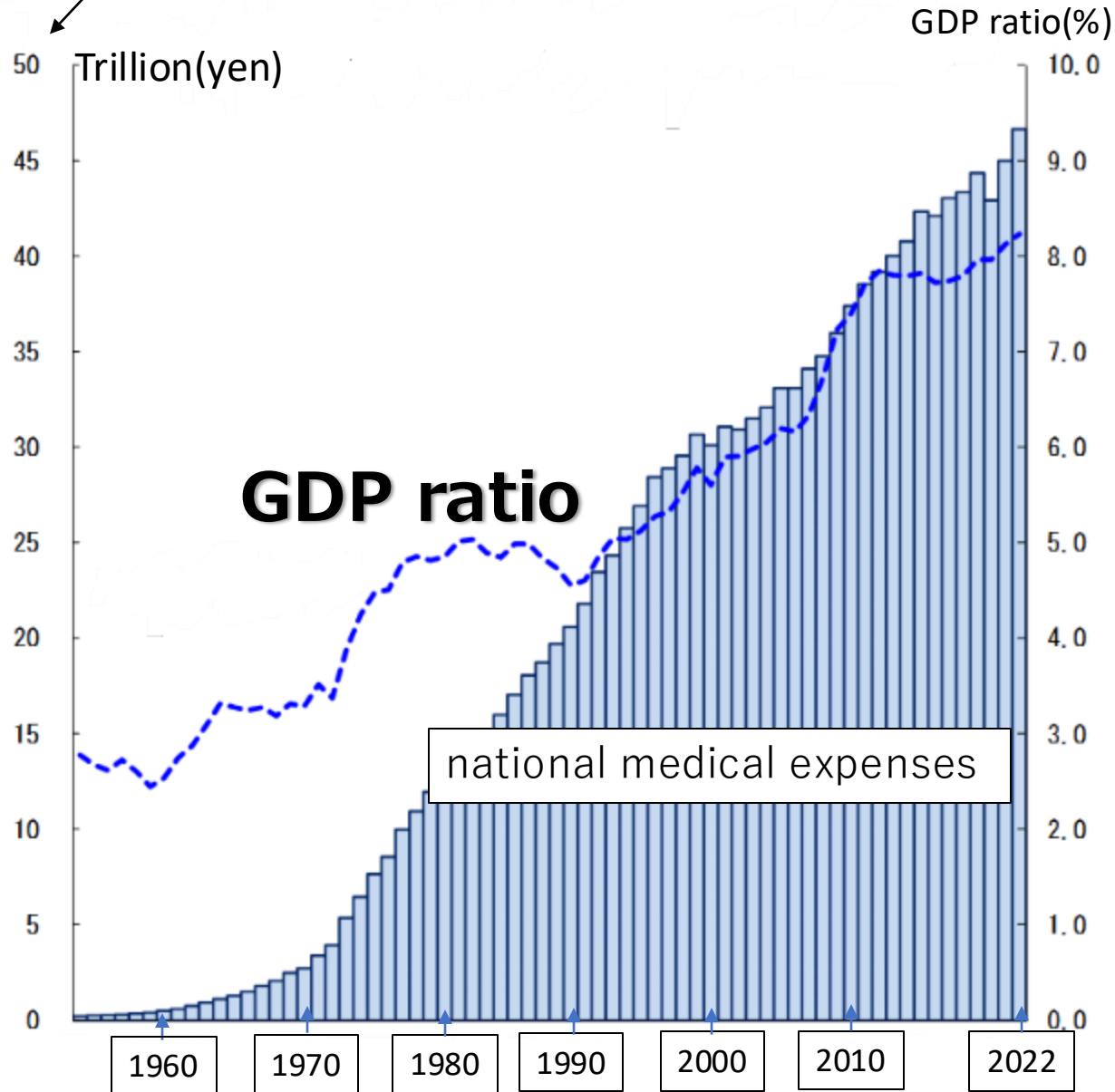
Countries/ territories with the highest estimated share of people aged 65 and older



Only includes countries / territories with a population of more than 1million people

MEDICAL EXPENSES IN JAPAN

\$333 Billion



National medical expenses

303 Billion (2021)

↓ 3.7%

311 Billion (2022)

**Percentage of medical expenses
(2022 in Japan)**

- 1 Cardiovascular Diseases 18.2%**
- 2 Cancer 14.7%**
- 3 Musculoskeletal Diseases 7.9%**

↪ FALLS

INTRODUCTION

JAPAN AS A SUPER-AGED SOCIETY
30.2 % of the Japanese population aged 65 or older.

HIGH RISK FOR FALL-RELATED INJURIES FOR THE SENIOR POPULATION
Especially high risk for women

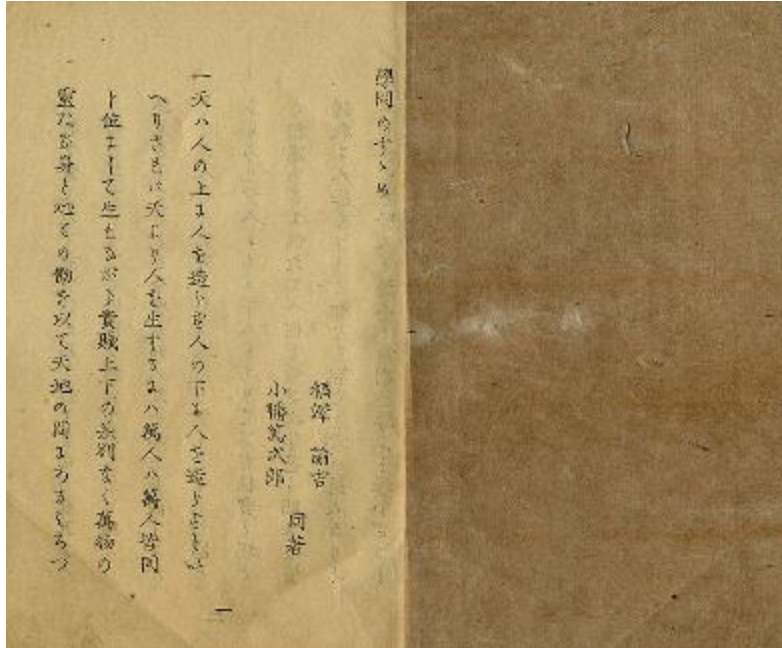
RESEARCH ON CAUSES AND MECHANISMS OF FALLING
BUT LACK OF PROGRAMS FOR FALL PREVENTION



ALL JAPAN JUDO FEDERATION FALL PREVENTION PROGRAM
“ UKEMI NO SUSUME ”

AJJF UKEMI NO SUSUME PROJECT

GAKUMON NO SUSUME



“UKEMI NO SUSUME FOR KIDS” 2023



“UKEMI NO SUSUME FOR THE ELDERLY” 2024



Yukichi FUKUZAWA
【1835-1901】

“GAKUMON NO SUSUME”
“An Encouragement of Learning”



Fukuzawa appeared on
the 10,000 Yen bank note



AJJF FALL UKEMI NO SUSUME PREVENTION PROJECT OUTLINE



➤ PROJECT TARGETING SENIOR CITIZENS LAUNCHED IN 2022

ASSESSMENT OF MOTOR ABILITY AND RISK FACTORS



PHYSICAL TRAINING BASED ON JUDO MOVEMENTS WITH
THE AIM OF IMPROVING GENERAL MOTOR ABILITY,
PHYSICAL STRENGTH, BALANCE AND COORDINATION

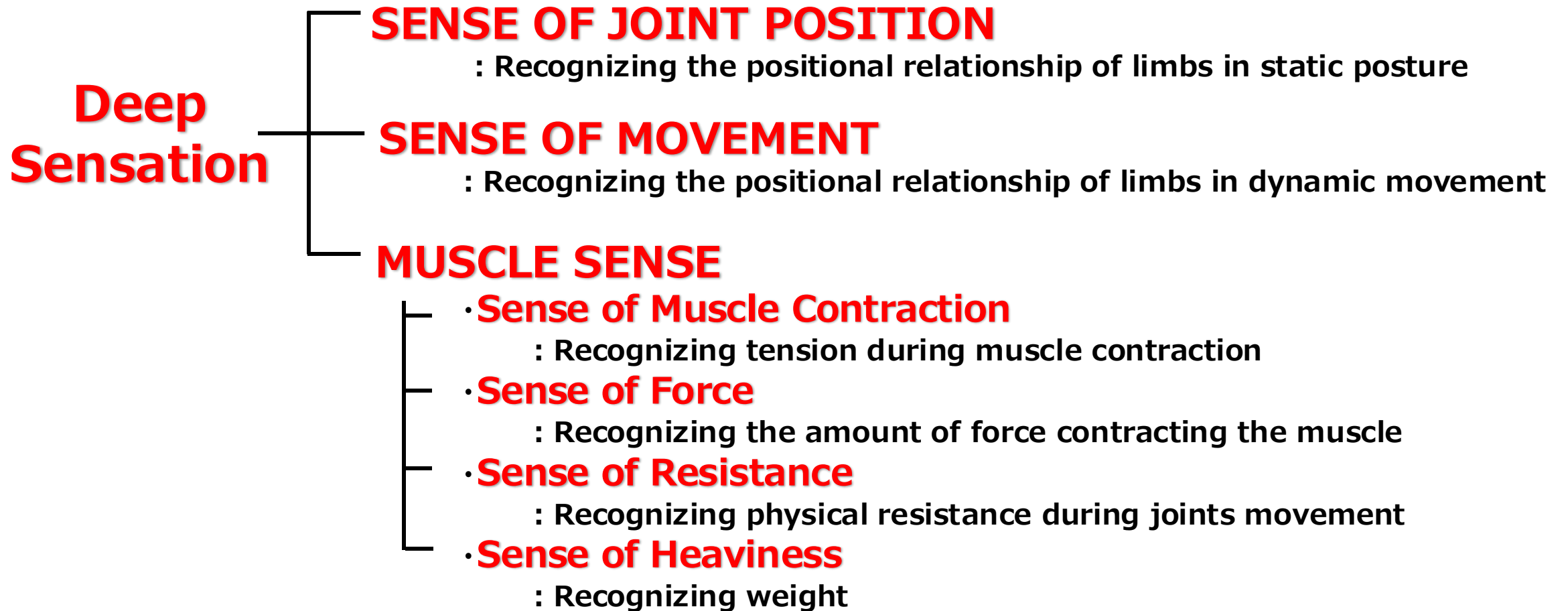
KATA-BASED TRAINING
PROGRAM

SAFE BREAK-FALLING ADAPTED TO THE INDIVIDUAL
NEEDS OF SENIOR CITIZENS.

BODY AWARENESS (PROPRIOCEPTION) AS A KEY ELEMENT FOR FALL PREVENTION PROGRAMS



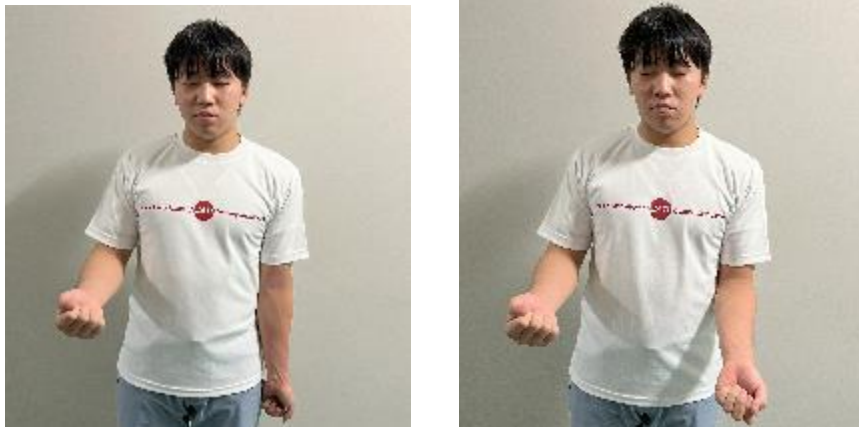
PROPRIOCEPTION (BODY AWARENESS)



KATA AS A TOOL TO IMPROVE BODY AWARENESS

“Proprioception” (Deep Sensation, Body Awareness) , the body’s ability to sense movement, action and location decreases with age

Example for assessing proprioception



Bending the elbow aiming for an angle of 90° with eyes closed, difference between left and right elbow.



IMPROVING DEEP SENSATION

Pre-Fall

Near Fall



**KATA-BASED TRAINING PROGRAM
UTILIZING TANDOKU-RENSHU**



THE POTENTIAL OF KATA-BASED EXERCISE FOR FALL PREVENTION

**TRAINING PROGRAM UTILIZING
SEIRYOKU-ZENYO-KOKUMIN-TAIKU TANDOKU-RENSHU**

LIST OF TECHNIQUES OF TANDOKU-RENSHU

- GOHO-ATE (五方当)
- O-GOHO-ATE (大五方当)
- GOHO-KERI (五方蹴)
- KAGAMI-MIGAKI (鏡磨)
- SAYU-UCHI (左右打)
- ZENGO-TSUKI (前後突)
- RYOTE-UE-TSUKI (両手上突)
- O-RYOTE-UE-TSUKI (大両手上突)
- SAYU-KOGO-SHITA-TSUKI (左右交互下突)
- RYOTE-SHITA-TSUKI (両手下突)
- NANAME-UE-UCHI (斜上打)
- NANAME-SHITA-UCHI (斜下打)
- O-NANAME-UE-UCHI (大斜上打)
- USHIRO-SUMI-TSUKI (後隅突)
- USHIRO-UCHI (後打)
- USHIRO-TSUKI (後突) AND MAE-SHITA-TSUKI (前下突)



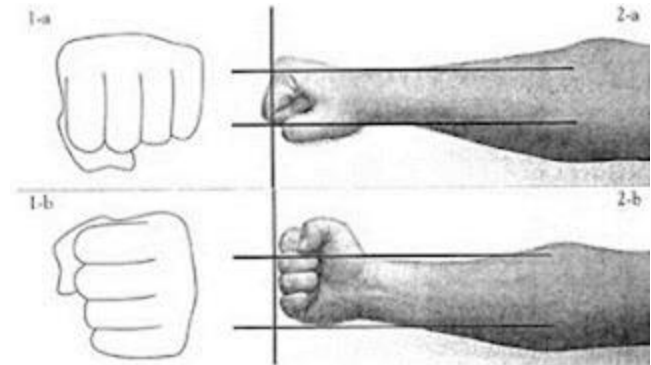
PRACTICAL SESSION
Sense of Position, Spatial Awareness
Sense of Movement and Direction
Balance



BASIC NATURAL POSITION (自然本体 SHIZEN-HONTAI)

GOHO-ATE 五方当

- Punching in five **directions**: 1.Left Diagonal Front, 2.Right Side, 3.Rear, 4.Front and 5.Upwards
- Focus on keeping a stable posture increases not only core strength but also arm **control**
- Proper execution improves **sense of movement**



O-GOHO-ATE 大五方当

- Punching in five directions with added foot movement:
1. Left Diagonal Front, 2. Right Side, 3. Rear, 4. Front and
5. Upwards
- Addition of foot work involving the lower body increases the intensity and requires better balance and coordination
- Footwork connects to foot motion required for fall prevention at the near-fall stage
- Intensity can be adapted to individual needs and capacity



GOHO-GERI 五方蹴

- Kicking in five directions; 1.Front Kick, 2.Rear Kick, 3.Left Diagonal Front Kick, 4. Right Diagonal Front Kick and 5.High Kick
- Focus on stable posture; center of gravity, core muscles and balance
- Speed, angle, direction and execution of the kicks can be adapted to individual needs and physical capability
- Stimulation of motor function, improvement of coordination
- Standing on one foot simulating near-fall scenario

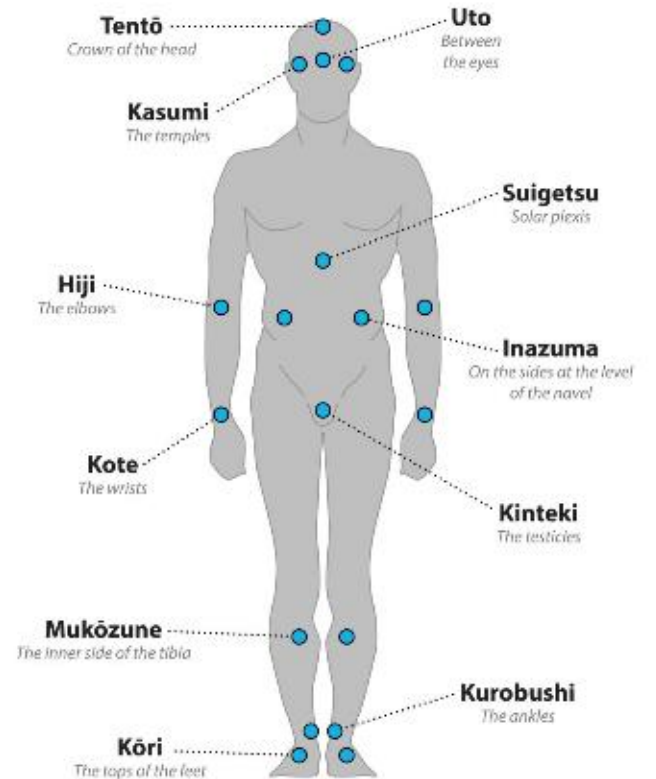


SUMMARY

- The techniques included into the first three sets of Seiryoku-zenyo-kokumin-taiiku tandoku-renshu aim at vital points and are executed to both sides into five directions, improving sense of position, movement and direction, overall motor control and balance.
- Even loads improve muscular balance and correct position.
- Seiryoku-zenyo-kokumin-taiiku has high potential for fall-prevention programs targeting the pre-fall and near fall stage within exercise programs aimed at non-judoka and judo practitioners of all ages and levels.

KYŪSHO 急所

The Vital Points



References

S. KIRYU (2020) *Purpose and Significance of Kata of Seiryoku-Zenyo-Kokumin-Taiiku*, in: Kodokan Judo Institute, The Bulletin of the Association for the Scientific Studies on Judo, Kodokan, pp.1-12.

K.FUKUDA (1973) *Born for the Mat. A Kodokan Kata Text Book for Women*.