



# ALPS ORTHOPAEDIC CENTRE



MBBS (S'pore), MRCSed,  
MMed (Ortho),  
FRCSed (Ortho)

## Dr Jerry Chen Yongqiang (陈永强医生)

Dr Jerry Chen is a fellowship-trained Consultant Orthopaedic Surgeon and Medical Director at Alps Orthopaedic Centre.

**Clinical Interests & Specialisation:** Enhanced Recovery After Surgery (ERAS), Hip and Knee Conditions, Joint Replacement Surgery, Joint Preservation Surgery, Sports Injuries, Minimally Invasive Surgery, Robotic Surgery, and Trauma Fractures of Upper and Lower Limbs

**Languages Spoken:** English, Chinese, Cantonese and Hokkien

### Clinical Practice and Expertise

Before starting his own specialist clinic, Dr Jerry Chen was a Consultant at Singapore General Hospital (SGH), where he accumulated over 13 years of experience in Orthopaedic Surgery. Having performed over 500 surgeries in a year, he has been instrumental in helping numerous patients recover from injuries and diseases of the musculoskeletal system.

As a driven and valued member, Dr Chen spearheaded the workgroup for Enhanced Recovery After Surgery (ERAS) for hip and knee replacement surgery at SGH. His clinical interests include ERAS Hip and Knee Surgeries, Joint Replacement Surgery, Joint Preservation Surgery, Sports Injuries and Rehabilitation, Minimally Invasive and Robotic Surgery, and Trauma Fractures of Upper and Lower Limbs.

ERAS is a specialised approach for orthopaedic surgeries that optimises the patient's preoperative, intraoperative and post-operative care to improve outcomes and recovery speed. Before the surgery, patients undergo a thorough assessment. They are encouraged to engage in rehabilitation exercises to strengthen their muscles. During the surgery, specific techniques are employed to minimise trauma and stress on the body. For instance, in total knee replacement surgery, the kinematic-alignment technique restores the patient's natural knee anatomy, minimising soft tissue damage and optimising joint mechanics.

Consequently, it effectively reduces post-surgical discomfort and pain. Postoperative care includes early mobilisation and targeted nutrition. The ERAS programme is strategically designed to return patients to routine activities as early as possible.

Over the course of his career at SGH, Dr Chen has successfully employed ERAS and reduced the average hospitalisation stay for hip and knee replacement surgeries from 4 days to 18 hours. This has benefited more than 2,000 patients thus far, enabling minimal postoperative pain and faster recovery.

### Unicompartmental Knee Arthroplasty (Partial Knee Replacement)

Knee osteoarthritis is the most frequently seen degenerative joint condition. Dr Jerry Chen strongly believes in tailoring the management according to the patient's symptoms, function and lifestyle. Apart from non-surgical treatments such as physical therapy and injectables for milder cases, there are also different surgeries available for more severe osteoarthritis. Unicompartmental Knee Arthroplasty (UKA), or partial knee replacement, maintains patients' normal physiological walking pattern and allows them to have a shorter recovery period.

Dr Chen is one of the few surgeons who specialises in UKA surgery in Southeast Asia. His patients have good outcomes after their UKA surgeries, where many could return to sports such as playing tennis and golf, hiking and jogging (including marathons).

### Total Knee Replacement

Dr Jerry Chen was one of the first surgeons in Singapore to perform same-day total knee replacement surgery. Improving the surgical technique and pain management has allowed patients to recover faster after total knee replacement and be able to recuperate at home within 18 hours of the surgery. Dr Chen is also well-versed in robotic total knee replacement using various systems including MAKO, ROSA, VELYS and CORI. He is a certified trainer to other surgeons for robotic total knee replacement.

### Direct Anterior Approach Total Hip Replacement

Hip arthritis is another commonly encountered condition in Orthopaedics. The surgical technique of Direct Anterior Approach (DAA) Total Hip replacement minimises post-operative pain for patients by avoiding damage to major muscles during surgery. Dr Jerry Chen is skilled in this surgery, having especially gone for additional training at Schulthess Klinik in Zurich, Switzerland, where more than 1,000 DAA Total Hip replacement surgeries are performed annually. His patients have the option of undergoing total hip replacement as a day surgery procedure and going home to rest comfortably after the surgery. Dr Jerry Chen is also a Certified Clinical Trainer to other surgeons for robotic total hip replacement.

### Clinical Appointments

Dr Jerry Chen served as the lead for total hip replacement for Singapore General Hospital's Value-Driven Care (VDC) workgroup, which was awarded the most improved SingHealth VDC programme in 2021. He was also a member of the Ageing Peak workgroup, which studied ways to improve patient outcomes after geriatric hip fracture and knee replacement surgeries. Moreover, Dr Chen is the Orthopaedic Lead for the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) team, which performs regular audits for the quality of surgeries done in Singapore General Hospital.

### Education and Training

Dr Jerry Chen graduated from the National University of Singapore with a Bachelor of Medicine and Bachelor of Surgery. He was subsequently accepted into the highly competitive Orthopaedic Surgery specialist training programme at SingHealth and clinched the Best Resident Award during his residency training years. Dr Chen is now an orthopaedic surgeon accredited by the Singapore Medical Council. He received his Membership of the Royal College of Surgeons (Edinburgh) in 2018.

Dr Chen was conferred the MOH Health Manpower Development Plan 2020 Award for Enhanced Recovery after Hip and Knee Surgeries (ERAS). Not one to rest on his laurels, he constantly seeks different learning opportunities. On his own initiative, he has completed several overseas trainings in countries such as China, Switzerland, Germany, and the United Kingdom, where he trained and worked with internationally renowned surgeons.

### Medical Teaching

As a Clinical Associate Professor at Duke-NUS Graduate Medical School, Dr Jerry Chen is actively involved in teaching medical undergraduates and junior doctors and has served as an examiner for their examinations. He is privileged to be a core faculty member for SingHealth's Orthopaedic Surgery residency training. In recognition of his outstanding efforts, he was bestowed the Inspiring Resident Educator Award in 2018.

Dr Chen is regularly invited to speak and teach at local and international conferences, underscoring his excellent reputation as a skilled orthopaedic surgeon. He has conducted teaching classes for hip and knee surgery courses, served as chairman at conferences, and has been invited to countries in Southeast Asia and China to share his surgical experiences with the local surgeons. He was also involved in a Trauma Management Project in Laos.

### Clinical Research

Besides his clinical duties, Dr Jerry Chen actively participates in different research programmes to improve patient treatment outcomes. These include keyhole shoulder surgery (for rotator cuff and labral tear repairs) and foot & ankle surgeries (for bunions and Achilles Tendon injury). He has published over 100 scientific papers and book chapters and has served as an invited reviewer for several top-tier international Orthopaedic journals. He has also received more than a million dollars in research grants thus far and was a recipient of the prominent Khoo Scholar Award.



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# Conditions and Services

## Hip

- Enhanced Recovery (ERAS) Direct Anterior Approach Total Hip Replacement
- Treatment for Hip Injuries and Hip Fractures

## Knee

- Enhanced Recovery (ERAS) Total Knee Replacement
- Unicompartmental Knee Arthroplasty (Partial Knee Replacement)
- Knee Preservation
- Arthroscopic (Keyhole) Cartilage Repair
- Arthroscopic (Keyhole) Meniscus Repair
- Anterior Cruciate Ligament (ACL) Reconstruction
- Posterior Cruciate Ligament (PCL) Repair
- Medial Collateral Ligament (MCL) Repair

## Robotic Surgery

- Robotic Knee Replacement
- Robotic Total Hip Replacement

## Sports Injury

- Sprains and Strains
- Muscle Tear
- Tendon, Ligament Repair
- Nerve Injury Repair

## Fracture Management

- Hip Fractures
- Ankle Fractures
- Foot Fractures & Stress Fractures
- Wrist Fractures
- Shoulder Fractures

## Non-Surgical Interventions

- Corticosteroid Injections
- Platelet-rich Plasma (PRP) Therapy

## General Orthopaedic

- Osteoporosis & Osteoarthritis

## Shoulder & Elbow

- Joint Dislocation
- Frozen Shoulder
- Shoulder Dislocation & Instability
- Shoulder Key Hole Surgery
  - Rotator Cuff
  - Labral Tear Repair
- Tennis Elbow, Golfer's Elbow

## Foot & Ankle

- Achilles Tendonitis
- Ankle Sprain
- Stress Fracture
- Plantar Fasciitis
- Bunion Removal

## Rehabilitation & Recovery

- Physical Therapy
- Post-operative Care and Rehabilitation Programs
  - Hip Replacement
  - Knee Replacement



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