Welcome to NAAC TEAM

DEPT OF ORTHOPAEDICS
RAJA RAJESWARI MEDICAL COLLEGE & HOSPITAL
DEPT OF ORTHOPAEDICS

Established in 2004
The Department of Orthopaedic Surgery aims to provide a comprehensive and integrated Program for Patients, Orthopaedic students, Residents, and Fellows.
OBJECTIVES

Excellence in Patient care, Excellence in Research, and Excellence in Education is the overall goal of the Department of Orthopaedics at RRMCH.
Department is part of Part of Raja Rajeswari Medical College
Names of programs offered

• MBBS
• MS Orthopaedics
Examination System:

- MBBS – Semester System
- MS Orthopaedics – Annual System
## Number of teaching posts sanctioned, filled and actual

<table>
<thead>
<tr>
<th></th>
<th>Sanctioned</th>
<th>Filled</th>
<th>Actual (including CAS &amp; MPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Lecturer</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tutor / Clinical Instructor</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Senior Resident</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
## Faculty profile

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualification</th>
<th>Designation</th>
<th>Specialization</th>
<th>No. of Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Rajagopalan N</td>
<td>MS. ORTH, D.ORTH.</td>
<td>Professor</td>
<td>Orthopaedics</td>
<td>38</td>
</tr>
<tr>
<td>Dr. Govindaraj</td>
<td>MS. ORTH,</td>
<td>Professor</td>
<td>Orthopaedics</td>
<td>19</td>
</tr>
<tr>
<td>Dr. Roshan Kumar B. N</td>
<td>MS. ORTH,</td>
<td>Professor</td>
<td>Orthopaedics</td>
<td>18</td>
</tr>
<tr>
<td>Dr. K. M. Gopinath</td>
<td>MS. ORTH,</td>
<td>Associate Professor</td>
<td>Orthopaedics</td>
<td>9</td>
</tr>
<tr>
<td>Dr. Kiran K. C.</td>
<td>MS. ORTH,</td>
<td>Associate Professor</td>
<td>Orthopaedics</td>
<td>6</td>
</tr>
<tr>
<td>Dr. Prashanth G. S.</td>
<td>D. ORTH, DNB. ORTH.</td>
<td>Assistant Professor</td>
<td>Orthopaedics</td>
<td>4</td>
</tr>
<tr>
<td>Dr. Mahesh Kumar N. B.</td>
<td>D. ORTH, DNB. ORTH.</td>
<td>Assistant Professor</td>
<td>Orthopaedics</td>
<td>2</td>
</tr>
<tr>
<td>Dr. Nandakumar Bhairi</td>
<td>D. ORTH, DNB. ORTH.</td>
<td>Senior Resident</td>
<td>Orthopaedics</td>
<td>2</td>
</tr>
<tr>
<td>Dr. Gururaja M.</td>
<td>MS. ORTH,</td>
<td>Senior Resident</td>
<td>Orthopaedics</td>
<td>1</td>
</tr>
<tr>
<td>Dr. Ramesh K. V.</td>
<td>D. ORTH.</td>
<td>Senior Resident</td>
<td>Orthopaedics</td>
<td></td>
</tr>
<tr>
<td>Dr. Syeedudddin Kutbe</td>
<td>DNB. ORTH,</td>
<td>Senior Resident</td>
<td>Orthopaedics</td>
<td>1</td>
</tr>
<tr>
<td>Dr. Venkat Deep</td>
<td>MBBS</td>
<td>Senior Resident</td>
<td>Orthopaedics</td>
<td></td>
</tr>
</tbody>
</table>
Dr. Rajagopalan N.,
Professor & Head of the Department
Dr. Roshan Kumar. B. N.
Professor & Additional Head of the department
Dr. Gopinath K. M.
Associate Professor
Co-ordinator Administration
Dr. Kiran K.C.
Associate Professor
Co-ordinator Academics
Dr. Prashanth
Assistant Professor
Co-ordinator Examinations
Dr. Mahesh Kumar
Assistant Professor
Co-ordinator HR
Dr. Nanda Kumar
Senior Resident
Dr. Gururaj
Senior Resident
Dr. Ramesh
Senior Resident
Dr. Syeeduddin
Senior Resident
Dr. Venkat Deep
Senior Resident
Postgraduate students
Program-wise Student Teacher Ratio

- MBBS - 150:10
- MS – 2:6
Support staff

• Number of academic support staff (technical) and administrative staff:
  • Sanctioned – 3
  • Filled - 3
  • Actual – 3
Research thrust areas

- Osteoporosis
- Osteoarthritis
- Vit D deficiency
- Rheumatoid Arthritis
- Deep Vein Thrombosis
- Trauma
Ongoing projects

- ICMR has granted approval for a study Project titled “Incidence of Vit D deficiency in males of age 30 to 60, attending OPD with low back pain”.
- Grant amount Rs. **65,57,250**
The only Orthopaedic department in the Karnataka state to have an ICMR GRANT
ONGOING RESEARCH PROJECTS

• Dr.Sai Kiran and Dr.Roshan Kumar - Efficacy of Arthroscopic Lavage in Osteoarthritis of Knee
• Dr.Arun Kumar and Dr.Roshan Kumar – Evaluation of management of diaphyseal fractures of long bones in children by Flexible Nailing
• Dr.Raghu and Dr.Roshan Kumar – Comparative study of closed reduction and plaster casting vs closed reduction and K wiring in extra articular fractures of the lower end of radius.
• Dr.Valliappan and Dr.Rajagopalan - Comparative study of long vs short Proximal Femoral Nail in unstable trochanteric fractures
## ONGOING RESEARCH PROJECTS (FACULTY)

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Title of the study</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Rajagopalan N.</td>
<td>Professor</td>
<td>Incidence of Low Backache in Medical Students in a single medical institution</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
<tr>
<td>Dr. Roshan Kumar B.N.</td>
<td>Professor</td>
<td>A comparative study of spinal surgery under spinal anaesthesia vs general anaesthesia - a retrospective study</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
<tr>
<td>Dr. K.M. Gopinath</td>
<td>Associate Professor</td>
<td>Incidence of Low Backache in Medical Students in a single medical institution</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
<tr>
<td>Dr. Kiran K.C.</td>
<td>Associate Professor</td>
<td>Incidence of Anterior Knee pain in patients with diaphyseal fractures of the tibia, treated with Interlocking Nailing – a retrospective study</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
<tr>
<td>Dr. Prashanth G.S.</td>
<td>Assistant Professor</td>
<td>Arthroscopioic Evaluation of Foot Print of ACL in South Indian population</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
</tbody>
</table>

Database of patients being done
## ONGOING RESEARCH PROJECTS (FACULTY)

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Title of the study</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Mahesh Kumar.N.B.</td>
<td>Assistant Professor</td>
<td>A clinical and radiological study of shoulder joint and acromioclavicular joint in malunited fractures of clavicle – a retrospective study</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee Database of patients being done</td>
</tr>
<tr>
<td>Dr. Nandakumar Bhairi</td>
<td>Senior Resident</td>
<td>Incidence of articular hypermobility syndrome in patients attending orthopaedic outpatient at RRMCH</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
<tr>
<td>Dr. Gururaja M.</td>
<td>Senior Resident</td>
<td>Incidence of DVT with out Thromboprophylaxis in Intramedullary Nailing of lower limb fractures</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee Database of patients being done</td>
</tr>
<tr>
<td>Dr. Syeeduddin Kutbe</td>
<td>Senior Resident</td>
<td>Serum Alkaline Phosphatase levels in fracture healing – a prospective study</td>
<td>Proforma has been made Applied for approval from Institutional Ethical Committee</td>
</tr>
</tbody>
</table>
Research facility

• CENTRAL RESEARCH LABORATORY
Publications:

- Number of papers published in peer reviewed journals (national / international) – 21
- Chapters in Books - 1
- Books edited - 1
Publications of Dr. Rajagopalan N., Professor and HOD.

- **Impact of associated injuries in the Floating knee: A retrospective study;** BMC Musculoskeletal Disorders, Volume 10, issue 1 (2009), p. 7. ISSN: 1471-2474 DOI: 10.1186/1471-2474-10-
National publication:
Publications of Dr. Rajagopalan N., Professor and HOD.

• Aneurysmal Bone cyst involving multiple bones – a case report – Indian Journal of Cancer
• Surgical Prophylaxis - Karnataka Orthopedic Association Newsletter 1978
• Dimensions of the lumbar vertebral canal – Indian Journal of Orthopaedics – Vol 37, No.5, July 2003; 186 -188.
• Thromboprophylaxis in Major Orthopedic Surgery, Indian Journal Of Orthopaedics, April 2003.
Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad

• Dr. Rajagopalan, Prof and HOD, has been Assessor for National Board of Examinations for hospitals in New Delhi, Kerala, Andhra Pradesh and Karnataka.

• Dr. Rajagopalan, Prof and HOD, had been appointed by MCI for Inspection of Medical Colleges in Karnataka.

• Dr. Rajagopalan, Prof and HOD, had been appointed by Govt of India as part of UGC panel for grant of Deemed University.

• Dr. Roshan Kumar, Professor,
Faculty serving in

- a) National committees - 3
- b) International committees - 1
- c) Editorial Boards
- d) any other (specify).

- Dr. Rajagopalan, Member, Advisory Board, Asia Pacific Advisory Board for DVT.
- Dr. Rajagopalan, Chairman, Project Review Committee, ICMR, New Delhi.
- Dr. Roshan Kumar, is a member of the Executive Committee of Karnataka Orthopaedic Association and Geriatric Orthopaedic Society
Awards / recognitions received at the national and international level by Faculty

- Dr. Rajagopalan N., Professor and HOD is a Visiting Professor, St. John’s Research Institute, Bangalore and Visiting Professor, Tamil Nadu Dr. MGR Medical University, Chennai, INDIA.
- Dr. Rajagopalan N., Professor and HOD is President, Computer Assisted Orthopedic Surgery- India
- Dr. Rajagopalan N., Professor and HOD, delivered prestigious Prof Sudhakar Shetty Memorial Oration in the Annual Conference of Orthopaedic Association of South Indian States at Pondicherry on August 25, 2013
Code of ethics for research followed by the departments

- ICMR ethical code
Diversity of staff

- Percentage of faculty who are graduates of the same university - 90%
- from other universities within the State - nil
- from universities from other States - 10%
- from universities outside the country - nil
Present details of departmental infrastructural facilities with regard to

• a) Library – DEPARTMENTAL LIBRARY WITH ADEQUATE BOOKS AVAILABLE
Present details of departmental infrastructural facilities with regard to

• b) Internet facilities for staff and students - AVAILABLE
Present details of departmental infrastructural facilities with regard to

- c) Total number of class rooms - 5
Present details of departmental infrastructural facilities with regard to

- d) Class rooms with ICT facility and ‘smart’ class rooms –
- Class room in dept with Wifi and LCD projector.
Present details of departmental infrastructural facilities with regard to

- e) Research laboratories – CENTRAL RESEARCH LABORATORY
- Postgraduate students have had a training in the applications of Facilities in Central Lab
RT PCR
Cobas e 411 Auto Analyzer
SPECTROPHOTOMETER
Fully Automated IHC/ISH instrument
Rotavap
Fluorescent Microscope
Milli Q Water Plant
Feedback on Curriculum

• Feedbacks are taken from students at the end of the posting.

• Feedback is discussed in department meeting with all the faculty and suggestions are noted for updates.
List the teaching methods adopted by the faculty for different programs including clinical teaching

- Objective Structured Clinical Examination (OSCE),
- Problem Case Discussion and
- Tutorials.
The department ensures that Objectives of the Department are constantly met and learning outcomes are monitored by frequent interactive meetings and feedbacks.
Students and Faculty participate in Extension activities by conducting and participating in rural camps and awareness camps.
Workshop conducted for Factory workers by dept of Anaesthesiology and Orthopaedics

- Workshop for Factory workers on:
  1. Basic Life support
  2. Oxygen administration
  3. CPCR
  4. Prehospital treatment of Trauma and injuries
- Ten candidates from Amruth distillery participated in the hands-on workshop using Mannequins.
  Pretest was conducted on -6-01-2014
  First aid measures -6-1-2014
  Pre-hospital treatment of trauma victims-7-1-2014
  BLS – 8-1-2014
  ACLS – 9-1-2014
  Wound care and first aid measures for Fractures-10-1-2014
Department of Anaesthesia conducted workshop for Factory workers on CPR and other Safety Measures
Health camp at Rotary Muthappa Attavar Memorial Hospital/Urban Health Centre – Channasandra

On 10/5/12, a general health camp was conducted at Rotary Muthappa Attavar Memorial Hospital/Urban Health Centre, Channasandra, Bangalore. Doctors from Orthopaedic dept from RRMCH were involved in the camp.
“beyond syllabus scholarly activities”

- Orthopaedic quiz is conducted for PG students and MBBS students.
- Post-graduates have attended various regional and national programs including cadaveric workshops.
- Dr. Arun Kumar, Postgraduate student, was sent as observer to P.M.R. Dept, C.M.C. Vellore from Sept 7th to October 7th 2013.
Institution is accredited by ISO
Strengths of the Orthopaedic department

• ONLY Orthopaedic department in the Karnataka state to get ICMR project
• Active in patient care
• Excellent and Dedicated Faculty
• Post-graduate students committed to learning
• State of the art Equipments
• Fully equipped Central Research Laboratory
• Excellent patient care
• Keeping abreast with recent trends and new procedures and implementing the same.
Weaknesses of the Orthopaedic department

• Publications can be improved
771 killed in road accidents in 2013

Bangalore traffic police collect Rs. 56.98 crore in fines

Special Correspondent

BANGALORE: In 2013, 771 people were killed and 4,289 injured in 5,230 cases of road accidents.

Though the traffic police claimed there were fewer cases than last year, the number of deaths recorded is more when compared to figures from the previous two years — 760 in 2012 and 762 in 2011, according to the statistics released by the traffic police on Thursday.

54.32 lakh cases

City Police Commissioner Raghavendra H. Auradkar said the city police booked 54.32 lakh cases of traffic violations in 2013, and collected Rs. 56.98 crore in fines.

A total of 8.22 lakh cases were booked against motorcyclists riding without a helmet and 1.28 lakh cases booked for using mobile while driving. Similarly 4.21 lakh cases were booked against those who jumped signals, 8.45 lakh cases for driving without valid documents, 68,865 for rash and negligent driving and 61,709 cases for drunk driving.

Tough on rash drivers

Additional Commissioner of Police (Traffic) B. Dayanand said the traffic police were getting tough on those involved in drag racing and

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**BANGALORE CITY TRAFFIC IN A NUTSHELL**

<table>
<thead>
<tr>
<th><strong>SOME FACTS ABOUT BANGALORE CITY TRAFFIC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>11,000 km of roads</td>
</tr>
<tr>
<td>44,000 intersections</td>
</tr>
<tr>
<td>Over 330 signalised intersection</td>
</tr>
<tr>
<td>128 one-way roads</td>
</tr>
<tr>
<td>3,000 traffic police to manage the city traffic</td>
</tr>
<tr>
<td>52 lakh vehicles including floating vehicles plying in the city every day</td>
</tr>
</tbody>
</table>

**PROJECTED GROWTH**

<table>
<thead>
<tr>
<th>CARS</th>
<th>TWO-WHEELERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 lakh in 2020</td>
<td>62 lakh in 2030</td>
</tr>
<tr>
<td>47 lakh in 2030</td>
<td>162 lakh in 2030</td>
</tr>
</tbody>
</table>

**BETWEEN 1995 AND 2010**

Population growth: 4.8%

Motor vehicle growth: 25%

Compared to other metro cities the growth rate of vehicles is five times higher than the population growth.

**SOARING NUMBERS**

48 lakh registered vehicles in the city with numbers growing at 10 per cent per year

Roughly 70 per cent of vehicles are two wheelers

Vehicle to person ratio 1:2 (compared to Delhi 1:4)

**ACCIDENT STATISTICS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Accidents</th>
<th>Deaths</th>
<th>Injured</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>7,772</td>
<td>892</td>
<td>6,150</td>
</tr>
<tr>
<td>2009</td>
<td>6,875</td>
<td>761</td>
<td>5,668</td>
</tr>
<tr>
<td>2010</td>
<td>6,483</td>
<td>858</td>
<td>5,343</td>
</tr>
<tr>
<td>2011</td>
<td>6,024</td>
<td>762</td>
<td>4,976</td>
</tr>
<tr>
<td>2012</td>
<td>5,502</td>
<td>755</td>
<td>4,471</td>
</tr>
<tr>
<td>2013</td>
<td>5,230</td>
<td>771</td>
<td>4,289</td>
</tr>
</tbody>
</table>
Opportunities

• Unfortunately Road Traffic Accidents are increasing.
• But this creates a need Trauma centers for emergency management of fractures.
• RRMCH is by its location has an opportunity for becoming a Major Trauma center and Orthopaedic Department has opportunity to expand.
• Rapid progress in Biomedical and Bio-Engineering technology.
Challenges for the department

• To improve infrastructure in parallel with progress in technology.
## Plan of action of the department for the next five years

<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Courses</strong></td>
<td>MS</td>
<td>MS PhD</td>
<td>MS PhD</td>
<td>MS PhD</td>
<td>MS PhD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fellowships in specialties</td>
<td>Fellowships in specialties</td>
</tr>
<tr>
<td><strong>TLE</strong></td>
<td>Plan is to change into interactive discussion</td>
<td>Conducting All India post graduate teaching programs Every year</td>
<td>Conducting All India post graduate teaching programs Every year</td>
<td>Conducting All India post graduate teaching programs Every year</td>
<td>Conducting All India post graduate teaching programs Every year</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>To increase the number of beds and number of units</td>
<td>To increase the number of beds and number of units</td>
<td>To increase the number of beds and number of units</td>
<td>To increase the number of beds and number of units</td>
<td>To increase the number of beds and number of units</td>
</tr>
<tr>
<td><strong>Research/Extension</strong></td>
<td>To make one publication and one presentation from faculty</td>
<td>To make one publication and one presentation from faculty</td>
<td>To make two publications and two presentations from faculty</td>
<td>To make two publications and two presentations from faculty</td>
<td>To make two publications and two presentations from faculty</td>
</tr>
<tr>
<td><strong>Infrastructures</strong></td>
<td>Early Total Care for Polytrauma</td>
<td>Designated Theater for Joint Replacements</td>
<td>Computer Aided Surgery</td>
<td>To have facility for stem cell transplant in orthopaedic cases</td>
<td></td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td></td>
<td></td>
<td></td>
<td>Stem Cell Transplant</td>
<td>Stem Cell Transplant</td>
</tr>
<tr>
<td><strong>Collaborations/Linkages</strong></td>
<td>Visiting International Consultants</td>
<td>PG teaching programs with International Faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THANK YOU