

PART 1: Overview of the Clinical Training Experience

OVERVIEW & INTRODUCTION

The UC Davis Pain Management Center is an advanced center for the evaluation and treatment of all forms of pain. The program has a tradition of providing fellows in training with the broadest experience in pain medicine, including appropriate applications of traditional and novel analgesics and state-of-the-art interventional procedures. Our training mission is to help future leaders in Pain Medicine advance through developing advanced knowledge and skills in managing patients in pain while practicing excellent patient care and participating in a stimulating research environment. We are fortunate to enjoy a diverse environment in multidisciplinary pain management where training and staff clinicians from many specialties work together. The clinical experiences offered at UCD in pain management are exceptionally varied. Our patient population ranges from adults to children, inpatients to outpatients and to patients with acute post-operative to chronic cancer and non-malignant pain.

We offer diverse clinical and didactic experience intended to stimulate our trainees to go beyond the facts of what is known in pain management to inquiry of what is yet to be known. Fellows are exposed to the full range of pain treatments from interventional to medical, benign to cancer, and from a medical model to behavioral rehabilitation. Broad ranges of interventional procedures are performed each day including neurolytic techniques and implantable devices such as spinal pumps and stimulators. Training experiences are substantially integrated with didactic and interactive teaching sessions focused toward understanding basic foundations of pain management. Additional off-site experiences are offered to supplement the fellows' experiences including participation in a national cadaver course on implantable devices.

The core faculty collectively has formal training in Pain Management as well as Anesthesiology, Physiatry, Internal Medicine, Psychiatry, and Psychology. Collaborations with almost every other service at UC Davis Medical Center offers our trainees an extremely diverse experience.

STAFF

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TITLE

Chief, Professor
Associate Professor
Professor
Associate Professor
Assistant Professor
Professor
Assistant Professor
Assistant Professor
Associate Professor
Practice Manager

CLINICAL SERVICES of the UCD PAIN CENTER

Acute Pain Service:

Provides ward coverage, consultation, and clinic services. Responsibilities include ongoing care for patients' with acute postoperative and other short-term pain states. Since the surgical and medical services at UC DAVIS can write for and guide their own Patient Controlled Analgesia (PCA) usage, our acute pain service does not manage the vast majority of PCA's and is largely responsible for overseeing the hospitals usage of epidural analgesia as well as a few cases of either complex or pediatric PCA.

Chronic Pain Service:

Covering both in-and out-patients, this service offers help for those with chronic non-malignant pain. Since patients in this group can range from post traumatic physical injuries to pain arising without a known source, management of chronic pain can be very challenging. Management for this group requires developing a wide array of pharmacological and non-pharmacological therapies. Ethical issues around usage of chronic opioids in this population remain an ongoing debate. More than in any other area of pain management, this service calls upon the clinician to develop multidisciplinary diagnostic skills and a global view of therapeutic and functional endpoints.

Cancer Pain Service:

Covering both in- and out-patients, this service provides analgesic therapies for the patient with malignant pain. Since these are often complex cases with dramatic diagnostic presentations, this service often challenges us to be prompt, diagnostically astute, and therapeutically diverse. These cases often call upon our widest therapeutic repertoire including diagnostic and therapeutic nerve blockade as well as pharmacological and psychiatric intervention.

The UC Davis Outpatient Pain Clinic:

(Nerve Blocks, New Office Visits, Follow-up Visits) The UC Davis Pain Center is located in the Lawrence Ellison Building, an advanced clinic with 6000 square feet, within the outpatient clinical center. It is here that outpatients receive evaluation and follow-up visits and where diagnostic and therapeutic nerve blockade procedures are performed. The Center is a referral resource for the entire metropolitan medical community including general surgeons, orthopedists, neurologists, internists, oncologists, pediatricians and psychiatrists. Thus, patients may vary from presenting with acute to chronic or cancer pain including reflex sympathetic dystrophy, post herpetic neuralgia, chronic lower back pain, headaches, peripheral neuropathy, chronic abdominal pain, cancer pain, phantom limb pain, and central pain syndrome just to name a few. Nerve blockade procedures usually are performed throughout the day. These may be regional injections (*see Nerve Blocks below*) or systemic injections such as intravenous lidocaine or phentolamine.

Interventional Procedures at the UCD Pain Center

Our service has a long and rich history in providing aggressive regional anesthetic care to the patient in pain. We routinely perform blocks under fluoroscopic (C-arm) guidance. Other blocks and procedures include Bier, trigger point injections, intravenous lidocaine, intravenous phentolamine, and tunneled epidural or intrapleural catheter insertion for chronic therapy. Fellows are offered the opportunity for additional training in less common procedures such as implantable devices (spinal cord stimulators, intrathecal pumps and catheters, radiofrequency lesioning, etc.) Our most common procedures include the following:

- epidural steroid injections*
- epidural sympathetic blockade*
- stellate ganglion blockade*
- lumbar sympathetic blockade*
- celiac plexus blockade*
- intercostal nerve blockade*
- facet joint injections*
- Bier blocks*
- intrapleural blockade of the stellate ganglion*
- Radiofrequency Lesioning*
- cryotherapy*

TEACHING SESSIONS

Teaching sessions include didactic and case based training in medical, surgical and psychological issues of pain management. These include topics in instructional approaches, neuroscience, ethics of medicine, behavioral rehabilitation, and physical rehabilitation.

ON CALL

Overnight call is taken from home. Attending back up is always available and fellows are encouraged to make use of it. Often, residents will cover the pager with the fellow as first back up. Coverage is rotated amongst the four fellows and each is expected to cover one weekend per month. This involves making round in the morning with an attending and then fielding other calls from home. It is the very rare occurrence that a fellow needs to return to the hospital at night.

INTRODUCTORY LECTURES IN PAIN MANAGEMENT

Over the first four weeks of the fellowship, the entire staff provides an introductory course in the fundamentals of pain medicine, as well as the role we play within the UC Davis community.

EXTENDED NERVE BLOCK INSTRUCTION

Multiple procedures are performed each day and fellows are usually in the role of lead interventionalist under the supervision of an experienced staff physician. Procedures are taught in didactic settings as well as during cases within the block-room environment.

CONDITIONS TREATED AT THE PAIN MANAGEMENT CENTER

Acute pain

- post-operative pain
- post-trauma pain

Cancer-related pain

- opiate tolerance or side effects
- opiate unresponsive pain

Chronic non-cancer pain

- back and neck pain
- headache
- reflex sympathetic dystrophy (RSD) / complex regional pain syndrome (CRPS)
- neuropathic pain (nerve injury pain) including postherpetic neuralgia
- musculoskeletal pain
- industrial injuries

PATIENT SERVICES AT THE PAIN MANAGEMENT CENTER

We believe that a comprehensive approach to patient care works best in achieving tangible results. Our assessment and pain management services encompass three treatment areas that interact to optimize patient outcomes for both physical progress and emotional well being. These include:

Pharmacological treatments

- Pharmacological consultation
- Expert use of novel analgesic agents
- Expert narcotic management

Procedural Treatments

- Procedural interventions, including nerve blocks, and neurolysis
- Implantable technologies, including spinal drug delivery and spinal stimulators
- Physical medicine and physical therapy assessment

Psychological Treatments

- Psychiatric and psychological assessment
- Biofeedback therapy
- Stress management training
- Pain support groups

Anesthesiology at UC Davis

Anesthesiology is an independent department in the School of Medicine. The principal focus of clinical services and clinical research is at the University of California, Davis Medical Center in California's capital, Sacramento. The department also conducts basic science research into fundamental questions relating to anesthesia, pain and the neurosciences on the main UC Davis campus in the neighboring city of Davis.

The Department conducts a three-year training program in anesthesiology and fellowships in pain management approved by the American Board of Anesthesiology. The primary teaching hospital is the University of California, Davis Medical Center.

Message from the Chair of Anesthesia

The Department of Anesthesiology at the University of California, Davis is an integral part of the University of California, Davis Medical Center located in Sacramento, California and the School of Medicine located on the main university campus in Davis, California. Together, these entities form the University of California, Davis Health System that encompasses a network of primary care and specialty healthcare providers throughout northern California.

The Department of Anesthesiology is a challenging and exciting place as it restructures and reengineers to maintain excellence in research, education, and clinical practice in the world of managed care.

The research laboratories on the Davis campus support research in four major areas:

- 1 Molecular biology as applied to anesthesiology
- 2 The neurosciences including neuromuscular function and aging
- 3 Cardiovascular physiology/pharmacology
- 4 Basic pain research

The Residency Program in Anesthesiology and the Fellowships in Pain Management are both fully accredited by the Residency Review Committee for Anesthesiology of the Accreditation Council for Graduate Medical Education. The department has designed an educational program emphasizing program-based learning and utilizing new developments in information technology to further knowledge, concepts and clinical decision-making. The program is strengthened by the clinical teaching program whereby emphasis is placed on subspecialty training and experience in the CA-2 and CA-3 years. The residency program features CA-3 years in the Advanced Clinical Track, the Clinical Science Track in any of the research areas indicated above, and Clinical Subspecialty Tracks in Cardiac Anesthesia, Critical Care, Neuroanesthesia, Obstetric Anesthesia, and Pediatric Anesthesia. Other innovations in resident education include an interactive learning center, a new library and an information technology resource center for residents and practicing anesthesiologists featuring interactive electronic autotutorials, computers and AV equipment. The Department has made a commitment to place the educational and learning needs of the residents as its paramount concern thereby ensuring sufficient time for self-paced learning and study. The Fellowship in Pain Management is part of a rapidly growing multidisciplinary pain medicine program. The Pain Management Center has developed strong links with Physical Medicine and Rehabilitation, Psychiatry, Psychology, and Orthopaedic Surgery to provide a multidisciplinary approach to patient care. The Pain Management Center presently cares for more than 6,000 patients per year. The Pain Program has also developed clinics at the VA clinics in Northern California. The Pain Center is working closely with the Primary Care Network and the Telemedicine to further develop outreach services to rural communities in the region.

Finally, clinical care is a major priority of the Department as faculty, residents, and nurse anesthetists administer over 16,000 anesthetics to patients at UCDMC. Perioperative care begins in the Preoperative Screening Unit, continues in 21 operating rooms and various other locations such as obstetrics, radiology, cancer center, gastroenterology laboratory, cardiac catheterization laboratory, and lithotripter, and is completed in the Post-Anesthesia Care Units or Surgical Intensive Care Units, where faculty critical care anesthesiologists and the acute pain service provide direct, consultative care for surgical patients. A total quality management program for surgical patients has been in place since October 1995 and continues to improve operating room efficiency.

In summary, the Department of Anesthesiology retains its commitment to excellence in clinical practice, teaching, and research but has changed dramatically to ensure that these goals can be met in today's rapidly evolving healthcare delivery environment.

Peter G. Moore, M.D., Ph.D.
Professor and Chair

About UC Davis and The UC Davis Medical Center

The UC Davis Medical Center is a referral-based tertiary care hospital serving patients from around the region and a community hospital for people in the Sacramento area. The UC Davis Health System is a unique partnership between the UC Davis School of Medicine and Medical Center providing the organizational framework that enables UC Davis to fulfill core teaching, research, patient care and public service missions. It encompasses the school's clinical faculty, the highly skilled health-care professionals and support personnel of the medical center and a geographically dispersed network of primary care providers. Together they deliver primary, secondary and tertiary care to Northern California. The UC Davis Medical Center is a state-of-the-art academic medical center that serves as the principal clinical teaching and research site for the UC Davis School of Medicine. It offers excellence in educating medical students, residents and fellows, allied health-care professionals, patients, their families and the general public.

The UC Davis Medical Center is located in Sacramento, 18 miles east of the general campus and the city of Davis. It handles a large volume of emergencies as well as referrals of complex, specialized problems from all over Northern California.

UC Davis Medical Center is the leading tertiary care referral center for 33 counties with more than eight million residents. It is a modern hospital facility with 457 beds, of which 104 are intensive care and 353 are medicinal and surgical beds. It is a vigorous and expanding medical center. Major new facilities include the UC Davis Cancer Center, an outpatient imaging center, two additional clinic buildings and two research buildings and an affiliated Shriners Childrens Hospital. UC DMC has one of the busiest trauma services in the country, with approximately 4,000 trauma admissions annually. It is California's only Level 1 trauma center north of San Francisco. It is also the principal tertiary-care referral hospital for more than five million residents from a 32-county region. This referral base provides a diverse case mix.

UC Davis Medical Center is one of five University of California teaching hospitals. As the primary clinical education site for the UC Davis School of Medicine, and the only area provider of many medical services, the medical center is integral to the health and well-being of Northern Californians. From both medical and financial standpoints, this institution contributes substantially to communities within the region. Licensed for 455 beds and fully accredited, UC Davis Medical Center is the region's leading provider of health care to underserved and underfunded populations. With only 18 percent of the licensed hospital beds in Sacramento, the medical center serves more than 43 percent of Medi-Cal patients in the area. UC Davis Medical Center is 98 percent self-supported through reimbursements for patient services. UC Davis Medical Center is located on 140 acres in central Sacramento, three miles from the state Capitol and 20 miles from the main UC Davis campus. The university established the medical center in 1973 to support the clinical and research missions of the then new UC Davis School of Medicine

In 1996, UC Davis Medical Center and School of Medicine integrated certain functions and administrative structures to operate as a unified health system that can compete in a managed care environment. Known as the UC Davis Health System, the organization

encompasses the school's clinical faculty, the highly skilled health-care professionals and support personnel of the medical center, and a geographically dispersed network of primary care providers. Together they deliver primary, secondary and tertiary care to a broad geographic region in Northern California. Efforts to develop the system are based on a shared vision of the future and a firm belief that the long-term success of the School of Medicine is inextricably linked to the clinical enterprise and the financial viability of the health system. To give broad oversight for both the school and the medical center and to develop a more efficient and effective organization, the health system has created one reporting system and has already integrated several key management functions. While historically there have been separate administrative structures in the school and hospital for information systems, finance, personnel, purchasing and billing, the school and medical center consolidated the information systems management and personnel functions and are evaluating other areas for integration.

Research programs within UC Davis School of Medicine and Medical Center continued to grow and diversify in fiscal year 1995-96. Overall support for research activity totaled more than \$42 million from 325 separate research projects. The projects, funded through grants and contracts from federal, state, industry and private sources, span the basic biomedical sciences as well as applied research on current problems in many medical specialties. They also include multicenter clinical trials of investigational drugs, devices and medical procedures and large-scale epidemiologic studies. These research activities, conducted in the 19 clinical and five basic science departments of the school and medical center, often involve colleagues from other UC Davis colleges and units, including the School of Veterinary Medicine, Division of Biological Sciences, Institute for Toxicology and Environmental Health, College of Agricultural and Environmental Sciences, College of Engineering, College of Letters and Science, and California Regional Primate Research Center.

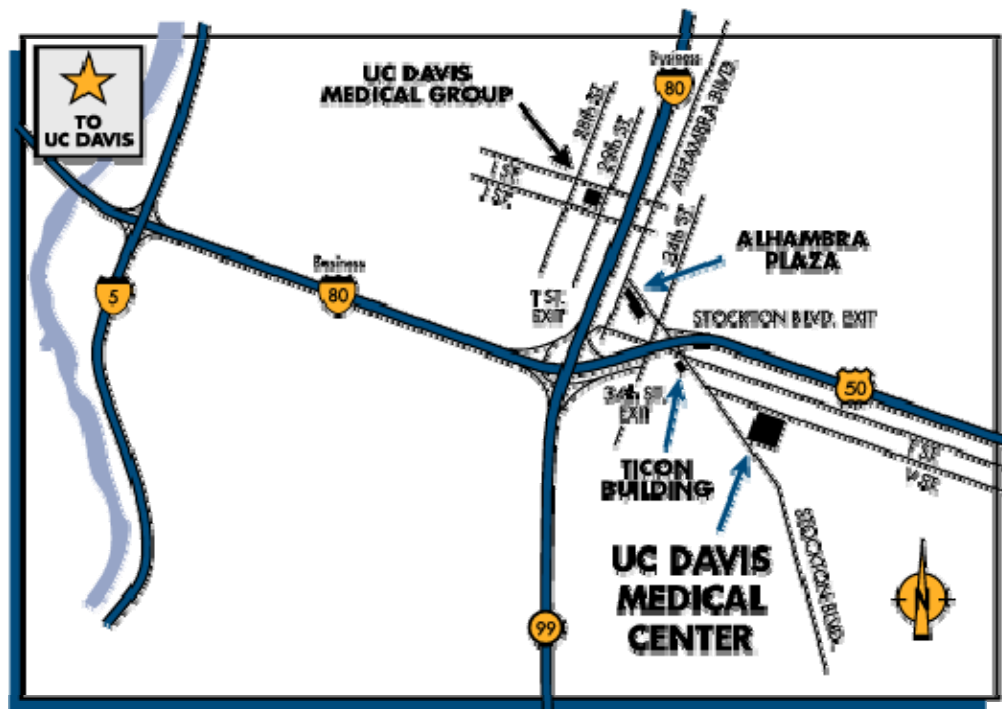
THE APPLICATION AND INTERVIEW PROCESS

Generally, applications should be submitted 12 months in advance of the candidate's desired appointment. Occasionally, unexpected vacancies may occur and highly qualified candidates are encouraged to seek information regarding availability. Application submissions must include a letter of interest accompanied by curriculum vitae and three letters of reference including one from the applicant's current program director or department chairman, sent to Scott M. Fishman, M.D., Director. Additional requirements for consideration of International Medical Graduates include maintaining the legal right to remain and work in the US (J-1 visa or permanent resident status). Interviews are scheduled from September through November for candidates initially selected based on their completed applications. Fellowship positions are offered by mid January.

The Department carefully reviews completed applications on a revolving basis. Those candidates deemed well-suited for the program are invited to visit the department to meet members of the faculty and the fellow staff. During this visit, candidates have an opportunity to tour the pain center and hospital campus and to meet informally with fellows in the program. Our Administrative Coordinator is happy to facilitate arrangements,

including securing reduced-cost hotel rooms and accommodating requests to meet with particular staff or fellows. Through this intensive one-day visit with the department, we hope to give prospective pain fellows a realistic feeling of the stimulating environment and exceptional opportunities that the UC Davis Fellowship in Pain Management has to offer.

From the applications received for fellowship training, approximately 10-15 candidates are selected for interviews. In the selection process, little emphasis is placed on candidates' board exam scores. Outstanding academic performance and high levels of scholarship are typical of our fellows. Evidence of leadership in medical programs and the community are given special note. Outstanding clinical skills are essential, as evidenced by performance in clinical rotations and evaluations of technical abilities. The quality of a candidate's research experience is an important predictor of success in the academic environment and is given strong consideration. Personal qualities are a critically important determinant of success in our program; therefore, personal recommendations are weighed carefully. Finally, candidates with unique personal experiences enrich and lend balance to the Department, a department that values cultural and ethnic diversity. The UC Davis Medical Center welcomes fellows who can enrich this community as well as benefit from it.



DIRECTIONS TO THE UC DAVIS MEDICAL CENTER:

2315 Stockton Boulevard, Sacramento

UC Davis Medical Center is conveniently located in Sacramento near Highway 99, Highway 50 and Business 80.

BY AUTOMOBILE

From the West ->From the west (Davis, San Francisco), take Business 80/Capital City

Freeway east (Reno) to Highway 50 (Placerville). Take the 34th Street exit and turn left onto 34th Street. Turn right onto T Street, then right onto Stockton Boulevard. Continue three blocks to UC Davis Medical Center.

From the North -(Sacramento Metro Airport), take I-5 south to Business 80/Capital City Freeway east (Reno). Follow Business 80/Capital City Freeway east to Highway 50 (Placerville). Take the 34th Street exit and turn left onto 34th Street. Turn right onto T Street, then right onto Stockton Boulevard. Continue three blocks to UC Davis Medical Center.

From the South - (Stockton, Los Angeles), follow Highway 99 north to Business 80/Capital City Freeway east (Reno). Exit at T Street. Turn right onto T Street, then right onto Stockton Boulevard. Continue three blocks to UC Davis Medical Center.

From the East - (Placerville), take Highway 50 to the Stockton Boulevard exit. Turn left on Stockton Boulevard and continue five blocks to UC Davis Medical Center.

BY TRAIN

Web Address: <http://www.amtrak.com>

PART 2: Sacramento, California & the Surrounding Area

HISTORIC SACRAMENTO:

The Old Sacramento historic area, a National Registered Landmark and State Historic Park, is a 28-acre site on the banks of the Sacramento River. A vital historical, business, residential, shopping and dining area, it contains the greatest concentration of historic buildings in California. In 1839, John Sutter arrived in Sacramento and established a permanent settlement. By early 1849, pioneer Sam Brannan had established several permanent buildings west of Sutter's Fort near the waterfront area. The news of the discovery of gold spread quickly, and the streets filled with gold seekers from around the world. Through the 1850s, the city continued to grow - in spite of the natural calamities that were an intrinsic part of Sacramento's early history. Soon after the first flood, fire swept through the city. In 1862, thousands of cubic yards of earth were brought in on wagons, and the city literally was raised above flood levels.

The Gold Rush of 1849 helped make Sacramento headquarters for some of the most influential men in the Old West. Collis P. Huntington, Charles Crocker, Leland Stanford, and Mark Hopkins - the Big Four - met in a hardware store with Theodore Judah and planned the first transcontinental railroad. The transcontinental telegraph also began in Sacramento.

Today, Old Sacramento stands as one of America's best examples of historical reconstruction. The area is home to the California State Railroad Museum, one of the world's largest railroad museums; the Sacramento Discovery Museum; the Sacramento Waterfront, depicting an 1870 riverside scene complete with sailing vessels and paddlewheelers; the California Military Museum; the B.F. Hastings Building, Pony Express Statue and many other historic sites. Old Sacramento links the city's rich heritage with its exciting future. (from: <http://www.oldsacramento.com/historical>)

GREATER SACRAMENTO GENERAL INFORMATION

The City of Sacramento was founded in 1849, and is the oldest incorporated city in California. Sacramento is the capital of the California. Sacramento is the center of one of California's fastest-growing regions. In addition to the obvious benefits of a rapidly expanding and diverse patient population, Sacramento is a highly livable city. The standard of living is higher and the cost of living is lower when compared to California's other heavily populated regions—the Los Angeles area or the San Francisco Bay area.

Sacramento is located near the northern end of California's Central Valley, at the confluence of the Sacramento and American rivers. Sacramento's hot and dry summers are tempered by cool delta breezes in the evening. Even in the heat of early summer, snow-capped mountains are just two hours away by car. Many ski resorts typically stay open from Thanksgiving through Easter.

Sports enthusiasts will find Sacramento's climate and opportunities ideal. The American

River Bike Trail follows 30 miles of riverfront, from downtown's historic "Old Sacramento" to the Folsom Lake State recreation area. Horseback riding, golf and tennis are year-round activities. Areas for skiing, backpacking, mountain climbing, fishing, boating and rafting are all readily accessible.

Sacramento is surrounded by some of California's most popular attractions, all within easy driving distance: Lake Tahoe and the Sierra Nevada mountain range, Yosemite National Park, San Francisco and the Carmel/Monterey Peninsula, Mendocino and North Coast shores, and the "wine country" of the Napa and Sonoma valleys.

HIGHLIGHTS OF TOURING SACRAMENTO & THE REGION

Culture: Sacramento is home to professional ballet, opera and theatre companies.

Entertainment: Performing arts, music, theaters and galleries galore. Sacramento is home to over 32 theaters, galleries and museums. Night clubs range from quiet piano bars to folk and pop ensembles, and from country western to rock and roll.

Recreation: In a city bound by two rivers, the American and the Sacramento, water recreation tops the list for outdoor activities: Salmon and steelhead fishing, river rafting, boating. All can be done on the 1,000 miles of waterways around Sacramento and the Delta. Nearby Folsom Lake and Lake Natoma offer sailing and windsurfing.

Sacramento municipal golf courses provide the surrounding community with 540 acres of quality fairways and greens.

More than 120 city parks encompassing over 2,000 acres provide outstanding natural and developed park lands.

Major league sports are represented by the Sacramento Kings of the NBA and the Sacramento Monarchs of the WNBA.

Annual Events: Festival de la Familia, Sacramento Jazz Jubilee, Pacific Rim Street Fest, California State Fair, California International Marathon.

Shopping: Beginning with the oldest shopping center in Sacramento, the Town and Country Village was built in 1946 to accommodate the new homes in the area. The ranch-style center at Fulton and Marconi avenues has 55 shops on its 22 acre lot. Other well-stocked shopping centers in Sacramento include Arden Fair, located at the Capital City Freeway and Arden Way. Arden Fair contains Nordstrom, Sears, Macy's and JC Penney, in addition to 150 specialty shops, restaurants, a multi-screen cinema and a food court. Pavilions is where you'll find cosmopolitan shopping and fine dining. Located on Fair Oaks Boulevard, east of Howe Avenue.

Downtown Plaza, on the K Street Mall between 3rd and 7th streets, has many restaurants, and 150 boutiques and specialty shops in addition to Macy's. A \$107 million expansion completed in 1993 added a multi-screen cinema.

SACRAMENTO INFORMATION SOURCES

There is no shortage of things to see and enjoy in Sacramento and surrounding areas. The Sacramento Convention & Visitors Bureau is a visitor's resource for where to go to get the best from Sacramento. Visit our information center to learn the best way to explore and enjoy the area:

Sacramento Convention & Visitors Bureau
1303 J Street, Suite 600
Sacramento, CA 95814
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