

## Time Schedule Bone & Joint Live Online Seminar

8:30 A.M.–11:30 A.M. Morning Session

### OSTEOPOROSIS: NEW AND EVOLVING RISK FACTORS AND ADVANCES IN TREATMENT

#### Bone Metabolism & Risk Factors

- Regulation of bone metabolism: osteoclasts, osteoblasts, RANKL, osteoprotegerin, RANK, IGF-1.
- Risk factors for osteoporosis and osteopenia. Prevalence of low bone mass in premenopausal women.
- Bone loss: An emerging problem following obesity surgery.
- Implications of breast and prostate cancer on bone health.
- A review of the literature on osteonecrosis of the jaw in patients treated with oral bisphosphonates.
- The role of genetics and environment in the development of osteoporosis.
- Current guidelines for bone mineral testing. Current testing modalities (DXA, pDXA, ultrasound, etc.).

#### Vitamins, Minerals and Exercise: How They Effect Bone Health and Metabolism

- Vitamin D: A key regulator of bone metabolism. New guidelines for vitamin D intake.
- Bone health and osteoporosis: The role of vitamin k and potential antagonism by anticoagulants.
- Calcium requirements: New estimations for men and women. Getting more calcium in the diet.
- Muscle training for bone strength. Designing a strength training program to improve spinal and hip bone density.
- How bone adapts to altered loading environment. High intensity aerobic exercise vs low intensity on bone mass.
- Effects of exercise on postural balance and risk of falling in elderly people with decreased bone mineral density.

#### Pharmacological Intervention: Treatment and Prevention of Osteoporosis

- Pharmacological therapies for the treatment and prevention of osteoporosis. Review of mechanism of action.
- Bisphosphonate action on bone structure and strength: A look at current treatment options.
- Hormone replacement: Effect of estrogen therapy and estrogen-progestogen therapy on the bone metabolism.
- Nuclear Receptors and Bone: New targets for the development of therapeutic agents.
- Emerging pharmacologic therapies for osteoporosis: A look at drugs on the horizon.

Lunch 11:30 AM - 11:45 AM Break

11:45 A.M.–2:45 P.M. Afternoon Session

### RHEUMATOID ARTHRITIS: WHERE ARE WE TODAY?

#### Rheumatoid Arthritis: Development and Consequences

- Defining and diagnosing rheumatoid arthritis in adults and children.
- Inflammatory cytokines: The health consequences of chronic inflammation.
- Accelerated atherosclerosis in rheumatoid arthritis. The role of inflammation in heart disease.

#### Treatment Options: Pharmacological, Dietary and Exercise Interventions

- Effects of omega-3 polyunsaturated fatty acid supplementation for inflammatory joint pain.
- Immunomodulating effects of flavonoids on acute and chronic inflammatory responses. Increasing dietary flavonoids.
- Management of early rheumatoid arthritis: Current treatment options.
- Pharmacological therapy: Disease-modifying antirheumatic drugs, biological agents, and new emerging therapies.
- Effects of exercise on symptoms, function, aerobic fitness, and disease outcomes of rheumatoid arthritis.

### OSTEOARTHRITIS: A GROWING EPIDEMIC

#### Osteoarthritis: The Most Common Form of Arthritis

- Defining and diagnosing osteoarthritis. Osteoarthritis of the hip and knee.
- Risk factors for osteoarthritis. Recommendations to reduce the risk of osteoarthritis.

#### Pharmacological Intervention: Current Treatment Recommendations

- Current guidelines for the pharmacological treatment of osteoarthritis.
  - NSAIDs: Current recommendations on use.
- Antiresorptive agents and osteoarthritis: A new treatment option?
- New advances in treatment: Potential New Disease-Modifying Drug for Osteoarthritis.
- Nutraceuticals and viscosupplementation in the management of osteoarthritis.

#### Lifestyle Modification: Can We Preserve our Joints?

- A systematic review of randomized clinical trials of individualized herbal medicine.
  - Is treatment with chondroitin and glucosamine efficacious for osteoarthritis?
- Occupational and physical therapy for arthritis. A look at treatment options.
- Long-Term effectiveness of exercise therapy in patients with osteoarthritis of the hip or knee.
- Acupuncture as an adjunct to exercise based physiotherapy for osteoarthritis of the knee: A look at the research.
- Effects of obesity on joint biomechanics. Dietary recommendations for joint preservation.

**Course Objectives**

- State risk factors in the development of osteoporosis and arthritis.
- List current pharmacological interventions for the treatment/prevention of osteoporosis, rheumatoid arthritis and osteoarthritis.
- List dietary and exercise strategies for the management/prevention of osteoarthritis, osteoporosis and rheumatoid arthritis.