collaboration between the physician who utilizes OMT and the respective clinical specialist. Perhaps this partnership may also be extended in the area of clinical research.

With all of the potential challenges and opportunities mentioned here, perhaps none is greater than devising a way to ensure that cardiac patients continue to receive OMT from their primary care physicians. This is likely to be enhanced if clinical studies reinforce the value of this modality. At the Detroit Osteopathic Hospital, 300 open heart surgical procedures are performed annually. Each of these patients undergoing these procedures routinely receives manipulative management post-operatively as part of a comprehensive treatment protocol. On hospital discharge, each patient is referred to an osteopathic physician for follow-up care.

However, we do not know how many patients continue to receive OMT. Thus, not only must we devise methods to gauge treatment follow-up, we must encourage primary care physicians to incorporate OMT in the overall medical management of such patients.

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Will Medical Waste Tracking Act clean up environment?

As medical debris washed up along the eastern seaboard during the summer of 1988, state and federal legislators wasted no time proposing laws to control the problem. Much of this

legislation, particularly the Medical Waste Tracking Act passed by Congress in June 1989, targets physicians as medical waste "generators."

The act authorizes a 2-year pilot program implemented and enforced by the Environmental Protection Agency (EPA) and individual states. The regulations require documentation of waste disposal. This entails tracking waste from its initial origin (physicians', dentists', and veterinarians' offices; clinics; hospitals; and nursing homes) through the hauling and disposal process.

Regulated waste categories include: cultures and stocks of infectious agents; human whole blood and blood products; human pathologic waste, including waste generated from surgery and autopsy procedures; contaminated animal carcasses from medical research; and sharp instruments, such as needles and scalpels.

Currently, Connecticut, New Jersey, New York, Puerto Rico, and Rhode Island are participating in the pilot program. The regulations may be instituted nationwide, depending on the outcome of this trial.

Under the Medical Waste Tracking Act, violators can be fined up to \$25,000 per day in civil penalties and \$50,000 per day in criminal penalties. Willful violators may be sentenced to a maximum of 5 years in prison.

The EPA estimates the program will cost physicians and small hospitals about \$70 and \$3,750 per year, respectively. However, actual costs may be 5 to 10 times greater.

Certainly, environmental pollution is cause for concern. However, the question arises whether the amount of medical waste generated warrants such imposing costs. Less than 10% of the debris that washed up on New York's shores during the summer of 1988 was medically related.

In light of this fact, the American Osteopathic Association has expressed concern that EPA action on this matter is taking place without sufficient information from the medical community. As a result, action was taken to have

out sufficient information from the medical community. As a result, action was taken to have the AOA spearhead communications with the EPA to ensure that close communication is maintained with representatives of the medical industry.

What effect the Medical Waste Tracking Act

will have on the environment remains to be seen. Meanwhile, other significant air and water pollutants continue to choke our natural resources.

THOMAS WESLEY ALLEN, DO

HHS Secretary Louis W. Sullivan to keynote AOA Convention

Secretary of the US Department of Health and Human Services Louis W. Sullivan, MD, will deliver the keynote address at the 94th Annual AOA Convention and Scientific Seminar, Anaheim, Calif, November 12 through 16. Dr Sullivan, the first dean and president of the Morehouse School of Medicine in his native Atlanta, will focus on the healthcare problems of the underserved. The address will be given on Sunday, November 12, 1989, at 5:30 PM in the Anaheim Convention Center.

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A 3-D CT scan of a human knee joint, showing the femur (thigh bone) at the top and the tibia (shin bone) at the bottom. The bones are rendered in a dark, textured grey. Overlaid on the image are several bright blue lines that trace the contours of the femur and tibia, highlighting the joint's structure. The lines are thicker at the ends and thinner in the middle, creating a stylized, almost graphic representation of the bones.

3-D CT image of knee.

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Please see adjacent page for brief summary of prescribing information and references.

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*Leading industry audits for 12 months ending October 1988. Pharmacy sales of naproxen in the U.S. Data available upon request from Syntex Laboratories, Inc.

**Leading industry audit. A representative sample of 50 U.S. rheumatologists and 100 U.S. orthopaedic surgeons were asked which anti-arthritis they prescribe most often. In 1987 Naprosyn was named by 67% of rheumatologists and 33% of orthopaedic surgeons in this survey, which is conducted annually by an independent market research firm. Data available upon request from Syntex Laboratories, Inc.

†The most frequent complaints are gastrointestinal. See "Warnings" and "Precautions" sections of prescribing information.

1. Katona G, Burgos R, Ortega E: Pharmacokinetics of a single dose of naproxen in plasma and synovial fluid. Proceedings, IX European Congress of Rheumatology, Wiesbaden, September 1979. *Excerpta Medica*, 1980, pp 41-45.

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Brief Summary:

Contraindications: Patients who have had allergic reactions to NAPROSYN, ANAPROX or ANAPROX DS or in whom aspirin or other NSAIDs induce the syndrome of asthma, rhinitis, and nasal polyps. Because anaphylactic reactions usually occur in patients with a history of such reactions, question patients for asthma, nasal polyps, urticaria, and hypotension associated with NSAIDs before starting therapy. If such symptoms occur, discontinue the drug. **Warnings:** Serious GI toxicity such as bleeding, ulceration, and perforation, can occur at any time, with or without warning symptoms, in patients treated chronically with NSAIDs. Remain alert for ulceration and bleeding in such patients even in the absence of previous GI tract symptoms. In clinical trials, symptomatic upper GI ulcers, gross bleeding or perforation appear to occur in approximately 1% of patients treated for 3-6 months, and in about 2-4% of patients treated for one year. Inform patients about the signs and/or symptoms of serious GI toxicity and what steps to take if they occur. Studies have not identified any subset of patients not at risk of developing peptic ulceration and bleeding. Except for a prior history of serious GI events and other risk factors known to be associated with peptic ulcer disease, such as alcoholism, smoking, etc., no risk factors (e.g., age, sex) have been associated with increased risk. Elderly or debilitated patients seem to tolerate ulceration or bleeding less well than others and most spontaneous reports of fatal GI events are in this population. In considering the use of relatively large doses (within the recommended dosage range), sufficient benefit should be anticipated to offset the potential increased risk of GI toxicity. **Precautions:** DO NOT GIVE NAPROSYN® (NAPROXEN) CONCOMITANTLY WITH ANAPROX® (NAPROXEN SODIUM) OR ANAPROX® DS (NAPROXEN SODIUM) SINCE THEY CIRCULATE IN PLASMA AS THE NAPROXEN ANION. Acute interstitial nephritis with hematuria, proteinuria, and nephrotic syndrome has been reported. Patients with impaired renal function, heart failure, liver dysfunction, patients taking diuretics, and the elderly are at greater risk of overt renal decompensation. If this occurs, discontinue the drug. Use with caution and monitor serum creatinine and/or creatinine clearance in patients with significantly impaired renal function. Use caution in patients with baseline creatinine clearance less than 20 mL/minute. Use the lowest effective dose in the elderly or in patients with chronic alcoholic liver disease or cirrhosis. With NSAIDs, borderline elevations of liver tests may occur in up to 15% of patients. They may progress, remain unchanged, or be transient with continued therapy. Elevations of SGPT or SGT occurred in controlled clinical trials in less than 1% of patients. Severe hepatic reactions, including jaundice and fatal hepatitis, have been reported rarely. If liver disease develops or if systemic manifestations occur (e.g., eosinophilia or rash), discontinue therapy. If steroid dosage is reduced or eliminated during therapy, do so slowly and observe patients closely for adverse effects, including adrenal insufficiency and exacerbation of arthritis symptoms. Determine hemoglobin values periodically for patients with initial values of 10 grams or less who receive long-term therapy. Peripheral edema has been reported. Therefore, use with caution in patients with fluid retention, hypertension or heart failure. The drug's antipyretic and anti-inflammatory activities may reduce fever and inflammation, diminishing their diagnostic value. Conduct ophthalmic studies if any change or disturbance in vision occurs. For patients with restricted sodium intake, note that the suspension contains 8 mg/mL of sodium. **Information for Patients:** Side effects of NSAIDs can cause discomfort and, rarely, there are more serious side effects, such as GI bleeding, which may result in hospitalization and even fatal outcomes. Physicians may wish to discuss with patients the potential risks and likely benefits of NSAID treatment, particularly when they are used for less serious conditions where treatment without NSAIDs may be an acceptable alternative. Patients should use caution for activities

requiring alertness if they experience drowsiness, dizziness, vertigo or depression during therapy. **Laboratory Tests:** Because serious GI tract ulceration and bleeding can occur without warning symptoms, follow chronically treated patients for signs and symptoms of these and inform them of the importance of this follow-up. **Drug Interactions:** Use caution when giving concomitantly with coumarin-type anticoagulants; a hydantoin, sulfonamide or sulfonylurea; furosemide; lithium; beta-blockers; probenecid; or methotrexate. **Drug/Laboratory Test Interactions:** The drug may decrease platelet aggregation and prolong bleeding time or increase urinary values for 17-ketogenic steroids. Temporarily stop therapy for 72 hours before doing adrenal function tests. The drug may interfere with urinary assays of 5HIAA. **Carcinogenesis:** A 2-year rat study showed no evidence of carcinogenicity. **Pregnancy:** Category B. Do not use during pregnancy unless clearly needed. Avoid use during late pregnancy. **Nursing Mothers:** Avoid use in nursing mothers. **Pediatric Use:** Single doses of 2.5-5 mg/kg, with total daily dose not exceeding 15 mg/kg/day, are safe in children over 2 years of age. **Adverse Reactions:** In a study, GI reactions were more frequent and severe in rheumatoid arthritis patients on 1500 mg/day than in those on 750 mg/day. In studies in children with juvenile arthritis, rash and prolonged bleeding times were more frequent. GI and CNS reactions about the same, and other reactions less frequent than in adults. Incidence Greater Than 1%; Probable Causal Relationship: GI: The most frequent complaints related to the GI tract: constipation, heartburn, abdominal pain, nausea, dyspepsia, diarrhea, stomatitis. CNS: headache, dizziness, drowsiness, light-headedness, vertigo. Dermatologic: itching (pruritus), skin eruptions, ecchymoses, sweating, purpura. Special Senses: tinnitus, hearing disturbances, visual disturbances. Cardiovascular: edema, dyspnea, palpitations. General: thirst. Incidence Less Than 1%; Probable Causal Relationship: GI: abnormal liver function tests, GI bleeding and/or perforation, hematemesis, jaundice, melena, peptic ulceration with bleeding and/or perforation, vomiting. Renal: glomerular nephritis, hematuria, interstitial nephritis, nephrotic syndrome, renal disease. Hematologic: agranulocytosis, eosinophilia, granulocytopenia, leukopenia, thrombocytopenia. CNS: depression, dream abnormalities, inability to concentrate, insomnia, malaise, myalgia and muscle weakness. Dermatologic: alopecia, photosensitive dermatitis, skin rashes. Special Senses: hearing impairment. Cardiovascular: congestive heart failure. Respiratory: eosinophilic pneumonitis. General: anaphylactoid reactions, menstrual disorders, premenstrual syndrome (PMS), fever. Causal Relationship Unknown: Hematologic: aplastic anemia, hemolytic anemia. CNS: cognitive dysfunction. Dermatologic: epidermal necrolysis, erythema multiforme, Stevens-Johnson syndrome, urticaria. GI: non-peptic GI ulceration, ulcerative stomatitis. Cardiovascular: vasculitis. General: angioneurotic edema, hyperglycemia, hypoglycemia. **Overdosage:** May have drowsiness, heartburn, indigestion, nausea, vomiting. Empty stomach and use usual supportive measures. In animals 0.5 g/kg of activated charcoal reduced plasma levels of naproxen. **Caution:** Federal law prohibits dispensing without prescription. See package insert for full Prescribing Information.

*Incidence of reported reaction 3%-9%. Where unmarked, incidence less than 3%.

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October 1988

U.S. patent nos. 3,904,682, 3,998,966 and others.

The new NOF four-page holiday card announcement brochure is on its way to you! Watch for it.

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