the way to go.

Weighted gloves may alleviate bone mineral redistribution

Are "Heavyhands" weights and weighted fitness gloves gimmicks? Or will they prevent runners from behaving like mule deer?

Researchers discovered in 1973 that something odd occurred in mule deer when they developed antlers. Bone mineral was lost from unstressed areas of the deer, such as the ribs, and redistributed to the growing antlers.

Ten years went by before the significance of the bone mineral redistribution phenomenon really became clear. Its importance emerged in research by Dr. Everett L. Smith, director of the University of Wisconsin Biogerontology Laboratory.

Smith was studying osteoporosis, the loss of bone mass during aging. Osteoporosis is a major problem for older women, who suffer fractures as their bones become more and more brittle.

The impact of exercise on bone,

with Bill Hauda

which behaves much like muscle when placed under stress, was already known.

Studies showed distance runners had 20 percent more bone mineral content in their femurs than non-runners. Professional tennis players were found to have thicker humeral bones in their playing arm - 35 percent for men and 28 percent for women — than in their non-playing

At the same time, studies of astro-

nauts showed they lost 7 percent of their heel bones during only 10 days of weightlessness in space. People on bedrest for 36 weeks showed a loss of 39 percent of their bone mineral con-

Smith studied groups of women ages 35 to 95. His studies showed that a combination of exercise (aerobic dance) and good diet (with adequate calcium and vitamin D) reversed the women's loss of bone mass, which normally accelerates after meno-

In one three-year study, the control group lost 3.29 percent of their bone mineral content while subjects on a calcium-vitamin D supplement gained 1.58 percent and those on an exercise program gained 2.29 percent. In another three-year study, the control group lost bone mass at a rate of 2.44 percent, while an exercise group gained 1.39 percent.

The gain was not constant, however. Smith, who was using a device that measured bones in the arm to gauge mineral content of the subjects, found the exercise group experienced a drop in bone mass the first year before scoring gains in the second and third years.

The unexpected initial decline was eventually determined to be due to the calcium redistribution mechanism like that found in mule deer. Women placed on an aerobic dance program stressed their legs, for which calcium was taken from unstressed areas like the arms. The femur thickened, while the ulna and humerus initially weakened.

Smith said the skeletal system behaves like the muscular system. Both adapt to the stresses placed upon the

"If you don't use the human body, not only do you waste muscle mass and the heart, but you also lose bone," Smith said.

Osteoporosis is mainly a problem for women, who lose 30 percent of their bone between the ages of 30 and 70. Men start the aging process with about 40 percent more bone mass, lose it at a slower rate and usually don't have a problem with weak bones until their mid-80s.

With aging women suffering 150,000 to 200,000 broken hips a year in the United States, getting them to exercise could have a big impact on health care costs. Smith estimates the bill for their hospital care alone is about \$1 billion and, when nursing home care and other costs are added, the total price tag for osteoporosis is about \$3 billion a year.

What the calcium redistribution effect indicates, however, is that aerobic exercise like dance or running is not enough. Weights are also needed to maintain the upper body and Smith now recommends a routine that includes use of wrist or hand-held weights and pulling on surgical tubing attached to a post or

wall to prevent redistribution. The evidence seems to support the "Heavyhands" devices and weighted gloves sold for running. If you don't have time to get in upper body workouts separately, they are probably

COMING EVENTS:
April 7 — Black Earth: 10 miles. Vilas 10
Mile. 10 a.m. Black Earth School. Jeff Wick,
767-2680; Madison: Hash House Harriers
Run. 4 p.m. Shamrock Bar, 117 West Main St.
John Powell, 233-4807.
April 8 — Madison: 2 miles and 10 kilometers. American Red Cross Run. 1 p.m. Olin
Park. Info: 255-0021
April 14 — Madison; 5 and 10 kilometers.
Race Judicata. 10 a.m. Vilas Park. Matt
Cohn, 257-2784; 2 miles and 10 kilometers.
Crewsin' in 84. 9:30 a.m. Carson Gulley off
Babcock Circle. Janet Bogdanow, 256-4917.
April 15 — Madison: 5 and 10 kilometers.
American Concer Society Old Style Run.
Vilas Park. 1 p.m. Jari Johnston-Allen, 2490210.

(Send race schedules and results to Bill Hauda, 1210 Ellen Ave., Madison, WI., 53716.)

As far as bowling goes . . .

We've really got it good here

After competing in tournaments throughout Wisconsin and around the country the past few seasons, I've come to a conclusion that may startle some Madison area bowlers - we've got it good.

Don't agree? Next time you're out of the Madison area check the bowling centers. Automatic scoring? Probably not. The Madison area still has the highest percentage of automatic scoring in the nation.

And prices? For value, it's hard to find a better bowling area than Greater Madison.

For example, compare the Madison area to our larger sister to the east, Milwaukee. Comparable topline centers in the "Bowling Capital of the World" are in the \$1.25 to \$1.40 per game range, often without automatic scoring. What do you pay in your league(s)? Less, I'm sure.

If you find cheaper, you're probably in a center not up to this area's

Still not convinced? Try media coverage. Here's a challenge - find another daily newspaper in the U.S. that devotes more space to bowling than The Capital Times. Plus, local bowling scores are being reported on TV this season. And don't forget the WHA and MABPA All-Star Tourna-

Speaking of tournaments, did you know Madison is the smallest city to host (1969) the American Bowling Congress Championships in the modern era? Plus, all three state tournaments - men's women's and junior's - have been here in the last three seasons.

And, contrary to the beliefs of some, we're blessed with comparably excellent association tournaments. I won't try to compare the women's between Milwaukee and Madison, but I've bowled in both men's events the past two seasons and the MBA has come out way ahead.

The MBA's problems are few and minor compared to what I've encountered the past two seasons in the GMBA minor events.

In 1982, our two Kendor Corp. teams arrived for our minor events competition to find the leader board lacking scratch standings, though the GMBA entry blank detailed a scratch

Before we bowled there was a



scratch division. Those who remember Kendor captain Rich Wonders from his Madison days will understand that. Wonders, at the time the reigning U.S. Amateur Bowler of the Year, threatened to withdraw our teams and begin proceedings with the ABC if the scratch division was not reinstated.

I figured that was a big snafu until this year.

First, the GMBA office overbooked our original minor events time, forcing us to take another. On Feb. 16, Kendor No. 2 captain Bret Faulkner reserved Feb. 26 at 9 a.m. I called the next day and had that confirmed.

We arrived the morning of Feb. 26 at 8:45 and found an empty parking lot and locked bowling center. Nope, we weren't at the wrong place. The first squad was at 10 a.m. ... and we weren't listed on it.

"Uh, er, yeah, we had six spots not show up on Feb. 18 at 3 p.m. (our original time)," stammered the apologetic GMBA official. Those spots apparently were ours. We waited and bowled at 1 p.m.

A week later, we received GMBA average- and sanction-verification forms. Because seven of our 10 Kendor members are from outside the Milwaukee area, we only bowl enough GMBA league games (three this season) to qualify for the GMBA tourney. And this year we paid our sanction money at the GMBA Classic team event, rather than through a GMBA league, which apparently

created this paperwork snafu. It seems everything has worked out, though I won't feel safe until my GMBA checks are cashed. What saved the GMBA for us was the diligent work of GMBA Secretary Ray Jahn and his directors.

And great people are exactly what makes the Madison area a fantastic place to bowl.

So, the next time you get a chance, say thanks to one of the Madison area's amazing group of enlightened, customer-oriented proprietors, or dedicated, hard-working association officials - men's, women's and junior's.

I wouldn't want to bowl anywhere

BOWLING NOTES — The American Bowl ing Congress has perfected a machine to test the coefficient of friction of bowling balls, ac-cording to the March issue of *Bowling Maga*zine, the official ABC publication. "A bowling ball and steel drum (the machine) may be one step toward making sure all bowlers are playing the game under the same set of urles," the article says. Which means the urethane ball(s) (Hammer, Angle, Edge, etc.) you're currently using could someday be illegal. etc.) You're currently using could someday be illegal. ... As expected, retired superstar Earl Anthony is being chased by NBC-TV to be the color man for the network's telecasts of the 1984 PBA Fall Tour, according to the April issue of Bowlers Journal. ... PBA President Mike Durbin, five-time PBA champion Glenn Allison and PBA Public Relations Director Bud Fisher have been elected to the PBA Hall of Fame. They will be inducted April 16 during the Dinner of Champions kicking off the Firestone Tournament of Champions April 16. The PBA Hall now has 30 members. Durbin, 42, is a 12-time PBA tillist, including two Firestone's, and is color man including two Firestone's, and is color man for USA Cable Network's telecasts of the PBA. Allison, 53, is a PBA charter member who earned his greatest fame by rolling a perfect 900 series during league competition on July 1, 1982. Fisher, 61, was the PBA's first full-time employee and will be retiring this fall. ... The spring meeting of the Madison Women's Bowling Association will be held May 17 at 7:30 p.m. at the Eagles Club. MWBA champions will receive their awards. and elections will be held. Interested candidates are asked to contact their league secre-

Memorial, West seek repeat city track titles

Madison Memorial will be after its second straight title in the boys' city the UW Memorial Sports Center.

Last season, the Spartans dethroned Madison West. But tonight, they may have to defend their title without the services of sprint standout Charlton Hamer, who has been slowed with an ankle injury. Last year, Hamer won state titles in both the 400- and 800-meter runs.

Defending champions back (besides Hammer in the 440) are Memorial hurdler Brent Jensen, Spartan sprint relay man Jim Cazaz, Madison East shot putter Todd Coates and Madison LaFollette long jumper Nick Cruz. In girls' competition Wednesday

night, Madison West will try to make it 11 titles in a row.



HENRY A. KOSHOLLEK/The Capital Times

Memorable moment

A happy Gay Schedal shows off the ball he used to roll a 288 game at Vikings Lanes March 15. The 77-year-old Schedal, who averages 159 pins per game, finished his big night with a 624 series.

City, area bowlers roll 13 nationals

By JEFF RICHGELS

Special to The Capital Times

Debbie Walker rolled 665 and Jim Kennedy scored 745 to lead 13 nationals — eight by women and five by men - recorded in city and area bowling Monday and over the week-

Walker chained games of 242, 222 and 201 in the Dream Lanes National League for her first national and the 14th-highest women's count of the

season. Other women's nationals were: Marge Pursell 649-226, her 21st this season, tops among women, in the Casino Lanes Early Birds League; Amy French 639-220, her first, in the Dream Pinbusters League; Nikki Schmid 633-256, her first this season, in the Oregon Bowl High Bowlers League; Char Hellenbrand 618, her third, in the Waun-A-Bowl Rascals League; Pat Schultz 607-244, her first, in the Lodi Bowl Gutter Dusters League; Judy Mick 607-242, her first, in the Northgate Lanes Matched Pairs League; and Rita Harvey 601-238, her first, in the Prairie Lanes Mixed League.

Kennedy followed a pair of 266 games with a 213 in the Dream Kipp League for his first national of the season.

Other men's nationals were: Jeff Barsness 719 (208-247-264), his sixth this season, in the Sport Bowl Major League: Jim Andreas 715 (257-242-216), his 13th, in the Andreas Lanes Sportsmen's League; Bill Habich 701 (236-236-229), his third, in the Spartan Bowl Major League; and Pat Dushack 700 (229-256-215), his sixth, in the Prairie Businessmen's League.

Loretta Sissons earned a patch by converting the 4-6-7-10 split in the Village Lanes Gutter Dusters League.

Split pick-up: Janice Glynn 3-7-10, Gayle McCredie 7-9-10.

Top 10

MEN	
lim Kennedy	745
left Borsness	/ 13
Jim Andreas	719
Bill Habich	70
Pat Dushack	700
Mark Henry	694
Greg Smith	69
Walt Braun	68
Dave Duane	88
Mary Poulik	88
WOMEN	
Debbie Walker	88
Marge Pursell	
Amy French	
Amy Flench	
Nikki Schmid	03
Char Hellenbrand	01
Judy Mick	bu
Pat Schultz	6U
Rita Harvey	60
Joan Van Fleet	59
Dellaway	59

At CASINO LANES
Big Eight: Mark Henry 694-257, Greg Smith 690258. Mike Thaden 677-256, Dave Bauer 663, Jim Ziehr
641, Dave Ninedorf 637, Jeff Brown 608, Bill Scheer 604,
Loran Mezera 604. First-Nighters: Jeff Taylor 606.
At VILLAGE LANES
Dearhunters: Mark Bratz 657, Denny Egner 605.
Suburban: Duane Kopp 649, Jerry Sumwalt 621.
At BOWL-A-VARD LANES
OM: Greg Pursell 650, Rick Festge 609.
At NAKOMA LANES
Ray-0-Vac: Tom Michaelis 634.
At BURR OAKS BOWL
Early KC: Marv Blum 608.
Badger All-Star: Ken Smith 656, Randy Thompson
619, George Christenson 603, Rob Noyce 601. Handicappers: Bob Neilson 600. Sub Merchants: Wait Braun 684,
Butch Denson 634, Greg Kinson 627, Mike Crawford
612.

Women

AT NORTHGATE LANES

AT NORTHGATE LANES
Sundowner: Val Martinelli 544.
At NAKOMA LANES
First-Niehters: Sara Poul 577, Vaneta Hankel 567,
Ina Smolker 555, Rae Rocca 539, Gali Plac 538, Lorene
Wendricks 538, Arlene Nye 537, Karen Pigorsch 535,
Jean Hubbard 530, Jackle Kellieher 529,
At BOWL-A-VARD LANES
Nighters: Ruby Broun 572, Jan Sparks 534.

At DREAM LANES
Blues: Linda Tyson 559, National: Deb Walker 665
(242-222-201), Elaine DuCharme 569, Vera Harris 546,
Hazel Halicki 546, Ruth Ziehr 526. Telephone: Bernie
Schroeder 560, Bannie Mosely 541, Kate Frambs 534.

At BURR OAKS BOWL

Businesswomen's: Home Savings 2,558-866. Tudy
Winnie 582, Fritz Stiessys 569, Dee Fix 561, Stephanie
Abitante 551, Lorraine Byingston 549, Dorothy Coenen
544, Helen Iverson 538, Joanne Wirth 534.

Mixed

At BURR OAKS BOWL
Curfew: Mike Melxner 605.
AT DREAM LANES
Monona Grove: Maria Wineman 533. Kipp: Jim
Kennedy 745 (266-26-213), Neol Carson 601. Suburbanite: Lane Slotten 634. East Side: Chuck Quartana 609;
Jan Wolder 566. Pinbusters: Dave Duane 684, Pete
Maly 636; Amy French 639 (219-200-220), Karen Griffin
555. Webcrafters: Dan Grubb 615. Odd Couples: Russell Notstad 652.
At CASINO LANES

Seli Notstad 652.

At CASINO LANES

Challengers: Randy Ferrie 603; Char Marty 550,
Kris Greenya 527. Niters: Joe Cullen 654. Early Birds:
Marge Pursell 649 (211-212-226); Rick Blanchard 600.
Lutheran: Mary Conley 563, Barb Bosold 546, Pat Witt
531.

531.

At VILLAGE LANES
Gutter Dusters: Todd Steckelberg 634. Neighbors:
Val Smith 542.

At SCHWOEGLER PARK TOWNE
Hustler's: Betty Amaio 539, Lisa Dennruiter 531.
Curfew; Larry Martin 668-254.

At NORTHGATE LANES Motched Poirs: Judy Mick 607 (242-200-165). Double M: Sherry Lee 566.

Area

At SPARTAN BOWL, McFarland Major: Bill Habich 701 (236-236-229), Jeff Barsness 657-266, Tom Everson 628, Greeg Johnson 627, Ron Nel-son 624, Rollie Truehl 620-258, Dave Kall 608. Stri-kettes: Sports Pub 2,457-845. Bev Brandt 553-225, Betty Bahr 544, Judy Schmudlach 527-223, Betty Meilum 527.

At VIKING LANES, Stoughton
Classic: Dino Bratz 675, Bob Wilburg 667, Dave
Buchwald 624, T.J. Vosberg 616, Terry Denk 612, Doug
Nayce 612. Twilighters: Viking Lanes 2,410-800, Judy
Casey 555, Judy Kinning 549, Kay Erdohi 539, Goli
Rhyner 536, VI Osland 530, Bannie Nayce 527, Jeannine

At PRAIRIE LANES, Sun Prairie
Businessmen's: Blasko Farms 3,023, Prairie
Lones 1,072, Pat Dushack 700 (227-256-215), Dwoin
Holznogel 635, Mark Miller 631, Charile Grossman 629,
Gary Kasbaum 623, Rich Anderson 616, Wally Ziesch
611, Ken Woerpel 610, Steve Holznogel 602. Major:
Country Klichen 974. Craig Reinen 618, Joe Kluever
617, Arnim Zellmer 614. Top Motch: Shoes Etc. 950, Bill
Seltzner 663, Jim Farrell 657, Mike Fredenberg 635.
Mixed: Rita Harvey 600 (194-238-169), Pat Patierson
592, Jaria Paweiski 533. Meli-Time Entertainment:
Dennis Grossman 640, Jake Schless 623; Judy Kasper
542.

At SPORT BOWL, Middleton
Major: Kwik Screen 2,996-1,080, Jeff Barsness 719
(208-247-264), Marv Poulik 682, Ron Schmidt 627, Buzz
Corcoran 625, Mike Adler 623, Jim Brown 620, Carl
Campbelt 601, Bid Schlotthouer 601. Stumblebums:
Randy Schor 611. Sportsmen: Marge Wedderspoon 529.

Af BOWLING GREEN, Middleton
Twilighters: Sue Green 526. Central Life: Ron Endres 620; Vicki Mosure 585. Bowlevils: Don Dahmen 613; Gerl Dahmen 560. Boils & Bogs: Jennie Lee Finley 558, Betsy Hoff 547. TGIF: Larry Fleming 614; Marianne Ruff 534. Happy: Steve Flagstaff 656. Greensleves: Glen Beil 621; Connie Dvorak 575, Judy Dvorak 559, Judy Kieta 532.

At HARE'S TOWNE BOWL, Middleton Girl Watchers: Mike Hipler 619, Odd Couples: Roger Schmitz 641, Ralph Carney 611; Kathy Reynolds 554.

At KAMM BOWL, Verona
Bowlerettes: Janet Adams 573, Judy Rothwell 564235, Marcia Rost 562, Carla Topp 542, Pat Sargent 533,
Darlene Strausman 528. Crazy Aces: Rae Ellen Rauch

S26.

At VERONA BOWL, Verona
Women: Verona Press 2,486-919. Betty Vroman
S50-224, Betty McCormick 536.

At WAUN-A-BOWL, Waunakee
Rascals: Ed Hellenbrand 606, Reg Acker 605;
Char Hellenbrand 618, Fralic: Waun-A-Bowl 2,8431,013. Grant Smith 655, Carl Holznagel 617.

At RUDE'S LANES, DeForest
Pinbusters: Token Creek Store 2,432-863. Barb
Notemeyer 537, Jenne Weichmann 535, Linda Simler
529.

At LODI BOWL, Lodi Gutter Dusters: Reed Wells 669-279, Brian Bohaty Larry Wieland 610-256; Pat Schultz 607-244, Karen var 583 331

Af OREGON BOWL, Oregon
High Bowlers: Nikki Schmid 633 (179-256-198),
e Anderson 557. At ANDREAS LANES, Cross Plains Sportsmen: Jim Andreas 715 (257-242-216).

Utah closes in on winning goal

The Associated Press

The Utah Jazz is closing in on coach Frank Layden's goal for the season, not to mention the National Basketball Association's Midwest Division championship.

Adrian Dantley scored 37 points Monday and Darrell Griffith added 25 to spark Utah to a 111-100 victory over Houston as the Jazz moved to within two victories of Layden's goal and increased its Midwest lead over Dallas to three games.

"With 10 games to go, we said we would be happy with 45 wins. Now we've won three out of four. We are 43 with five to go," Layden said.

The Jazz is now 43-34. The loss dropped the Rockets to 28-47 and 14 games behind Utah in the division.

Knicks 115, Bulls 113 Rory Sparrow scored 10 of his

team-high 24 points in the final 3:10 to lift New York past visiting Chicago, which has lost seven games in a row. Quintin Dailey scored a careerhigh 44 points for the Bulls, which also was a professional record by a visiting player at Madison Square

Bernard King, playing with dislocated middle fingers on both hands, added 18 points for the Knicks while Bill Cartwright had 16.

Little League sign-up begins

Registration for the East Madison Little League will be held Saturday, April 7, and Saturday, April 14, from 9 a.m. to noon at the East Little League Field, 1000 Sherman Ave.

Youngsters ages 7 through 15 who live in the East High School area are eligible.

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