Arthritis Rheum. 1998; 41(3)(suppl): S357.

STATUS AND PERIOPERATIVE FACTORS DO NOT PREDICT FUNCTIONAL IMPROVEMENT OR
F IN PATIENTS UNDERGOING HIP AND KNEE ARTHROPLASTIES C.A. Jones, D. Voaklander,
ston, M.E., Suarez-Almazor, University of Alberta, Edmonton, AB, Canada, T6G 2S2.
o identify the prognostic factors of pain and functional outcomes after total hip and knee arthroplasties

sing a population-based prospective cohort study, data were collected from 506 patients who were
d by their orthopaedic surgeons (26) for primary THA or TKA between December 1995 to January 1997.
ollected within a month prior to surgery and then 6 months post-operatively via in-person interviews,
ith databases, and medical chart reviews. The outcomes of interest, pain and function were measured
ase-specific measure, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC).
ear multiple regression using differences between baseline and 6-month scores were used to evaluate
perioperative factors related to improvement in pain and function. Covariates included: age, diagnosis,
dex (BMI), education, gender, hospital length of stay, number of complications, number of comorbidities,
bodily pain - physical function - mental health, type of residence and hospital discharge location.
ession models were used to compare patients who improved (>10-points) vs. patients who did not.
patients received a THA and 275 a TKA; 92% had osteoarthritis, mean age for THA was 68 years and
Both THA and TKA groups showed significant improvement in pain and function at 6 months (p< .001),
gains were greater for THA than TKA. Between 10 to15% of patients had not improved. Patients who
nctional status showed less improvement, probably because of a "ceiling" effect of the tool. In general,
ith status and perioperative factors had little impact on the degree of functional improvement or pain
sed comorbidities and BMI at baseline showed a borderline association of small magnitude with the
interest.
s. Pre and peri-operative data do not clearly identify those patients who will not improve at 6 months after
ough increased comorbidities and weight have small effects on the outcomes of THA. Our results
most arthroplasties are appropriately performed since the majority of patients improve, and baseline
data available to physicians is not helpful in identifying those patients who will not.

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oundation for Medical research.

IVENESS OF CUSTOMIZED INTERVENTION ON ORAL HYGIENE IN
TS WITH SCLERODERMA. J L Poole PhD OTR/L, University of New
Albuquerque, NM, C Brewer, MS OTR/L, CORE Network, Pittsburgh, PA,
MEd RDH, C Conte*, MA, MPH, D Perella, Pittsburgh, PA, K Rossie
, University of Pittsburgh, Pittsburgh, PA, Y. Steen, Georgetown University
Center, Washington DC
hen subjects with scleroderma are age, race, and sex matched to non-
na dental patients, subjects with scleroderma had more missing teeth and
tly more dental caries as compared to the controls. An earlier study showed
perature, dexterity, and joint motion correlated with oral hygiene scores of
ris and plaque. The purpose of this study was to determine whether oral
ntervention and range of motion exercises significantly improved oral hygiene
d decreased caries. Sixteen subjects with scleroderma were evaluated at
vith the Patient Hygiene Performance Index (PHP) and several functional
its (the Keital Index, pinch and grip strength, and timed manual dexterity
grooved pegboard and buttoning tasks). Clinical measures of skin
and the presence of scars, contractures, puffy fingers and xerostomia were
ved. Subjects received an intensive customized program consisting of
ucation on brushing and flossing techniques, upper extremity and facial
adapted dental appliances, and a 6 month supply of dental products. After
intervention period, subjects were reassessed. There were no significant
n any of the functional measures. While the mean PHP score did not
tly change post intervention, the mean number of sites with bleeding on
ecreased significantly, the % of teeth with supragingival and subgingival
ecreased significantly. These results show that the subjects with
na benefited significantly from the intervention program, demonstrating
oral hygiene and oral health.

*Arthritis Foundation, Western Pennsylvania

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& Collis Curve but study did not compare products so have no vested interest.

NG PHYSICAL ACTIVITY IN PATIENTS WITH POLYARTHRITIS - A PROSPECTIVE
LED TRIAL. R Nisell, MD, PhD, I Rydesiö, RPT, CH Stenström, RPT, PhD. Depart-
eumatology, Karolinska Hospital / Institute, Stockholm, Sweden.
of the study was to investigate the effects of an individualized physical activity support
patients with chronic polyarthritis.
f 67 patients with polyarthritis such as rheumatoid arthritis, psoriatric arthritis and
ylitis participated in the study; 39 in an intervention group (IG, mean age 46 years,
se duration 11 years, 72 % female) and 28 in a matched comparison group (CG,
46 years, mean disease duration 8 years, 68 % female). All patients were assessed
after one year with the HAQ, the SIP-RA, and the pain VAS. The ESR, the number of
swollen joints, the grip strength, the upper and lower limb function, and the aerobic
ere investigated at the same occasions. The IG patients were encouraged to set
dividual goals for improvements and to find suitable physical activities. They were
ctures, regularly phoned by their physiotherapist, and assessed and measured as
y third month. The assessment results were used together with activity logs as a basis
goal revisions. The CG patients were followed with regular medical check-ups and
erapy when needed.
ults showed improvements within the IG as regards recreation and pastimes according
RA (p<0.01), morning pain (p<0.05), and aerobic capacity (p<0.01), whereas the
swollen joints increased (p<0.05). As regards the CG, grip strength increased (p<0.05)
ecreased (p<0.05). The aerobic capacity was significantly improved in the IG as
o the CG (p<0.01). The goals regarding 'leisure', 'physical health', 'home
nt', and 'work' were highly attained in the IG, whereas those related to 'body weight',
d 'smoking' habits were poorly reached. As regards 'physical health' and 'leisure', goal
were significantly (p<0.05) higher in the IG compared to the CG.
lude, our study indicates that the support program promoted physical activity resulting
aerobic capacity and improved goal attainment as regards physical health and leisure
es in patients with long-standing polyarthritis.

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OUTCOMES OF PHYSICAL THERAPY AND OCCUPATIONAL THERAPY IN ADULTS WITH RHEUMATOID ARTHRITIS. JA Falconer, PhD, OT, JF Stewart, BS, JM Sinacore, PhD, RW Chang, MD, MPH. Northwestern University, Chicago, IL 60611 and University of Illinois, Chicago, IL 60612.

We evaluated the outcomes of physical therapy (PT) and occupational therapy (OT) for adults with rheumatoid arthritis (RA) in an academic rheumatology setting. A prospective matched-control design was used to assess 3 and 12 month outcomes of physical function (SF-12 Physical Function, AIMS2 Upper Extremity Function); mental status (SF-12 Mental Status, AIMS2 Affect); and pain (AIMS2 Pain). In the office practices of the 7 participating rheumatologists, twelve percent of all adults with RA were referred to PT or OT during the 3 consecutive month enrollment period. Thirty-three patients (87% case participation rate) who were referred to PT (N=26) and/or OT (N=10) were enrolled and matched on age, sex, disease duration, and ACR functional class to randomly selected nonreferred patients (82% control participation rate) from the same academic rheumatology group practice. The 33 matched pairs were comparable in demographic and health status at baseline. In general, the study sample was older (67% over 65 years of age), female (91%), had established disease (80% RA of greater than 2 years), and was functioning well (52% ACR Class I or II). Racial minorities made up 47% of the study population. At 3 months of follow up, there were no statistically significant findings at the .05 level, and effect size (ES) calculations revealed that cases were no better off than controls in SF-12 Mental Status (ES=0.03), AIMS2 Affect (ES=0.02) and AIMS2 Pain (ES=0.14). However, cases were found to be doing moderately better than controls in SF-12 Physical Function (ES=0.46) and AIMS2 Upper Extremity Function (ES=0.42). At 12 months of follow up, the remaining 27 matched pairs continued to show no difference in AIMS2 Affect (0.15) and AIMS2 Pain (0.01), but cases were found to be doing slightly better on SF-12 Mental Status (ES=0.22), SF-12 Physical Function (ES=0.22) and AIMS2 Upper Extremity Function (ES=0.21). Treatment content as reported by patient survey was: exercise (80%), joint mobilization (53%), arthritis education (40%), hot or cold packs (37%), splinting (35%), and joint protection training (30%). The results suggest that PT and OT as they are currently delivered may improve physical functions, but may require modifications to impact mental status and pain in this population.

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NIAMS, Greater Chicago Chapter of the Arthritis Foundation

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EFFICACY OF PULSED ELECTROMAGNETIC THERAPY IN PAINFUL KNEE OSTEOARTHRITIS Serge Perrot (1), Marc Marty (2), André Kahan (1), Charles-Joël Menkès (1) Department of Rheumatology A (1) Cochin Hospital, Paris 5 University, Paris (2) Clinica Statistica, Montrouge, France.

We conducted a randomized, double-blind controlled study to determine the effectiveness of pulsed electromagnetic fields (PEMF) in painful knee osteoarthritis.

Patients and method:

Forty patients (32 women, 8 men), 68.8 ± 9.4 years old, received 9 sequences of 1 hour of PEMF or placebo (pla) treatment during 9 consecutive days. All patients had painful knee osteoarthritis (visual analog scale (VAS) at motion > 40 mm) and fulfilled the ACR osteoarthritis criteria. VAS, Lequesne's algofunctional index (LAI) and number of responders (more than 30% of decrease of VAS and LAI score) were determined before (D0) and at the end of treatment (D9), and at 1 (M1) and 3 (M3) months after the end of treatment.

Results:

	Number of pts		Pain VAS		LAI		Responders	
	PEMF	pla	PEMF	pla	PEMF	pla	PEMF	pla
D0	21	19	68.4	75.3	10.4	11.2	-	-
D9	21	19	41.8*	59.5	8.5	10.3	5	2
M1	20	16	40.6	57.5	6.7	9.2	10*	2
M3	13	12	37.4**	64.1	4.9*	9.7	6	3

* $p<0.05$ ** $p<0.01$

Conclusions: clinical evaluation confirmed the analgesic and functional efficacy of PEMF in painful knee osteoarthritis. These positive results should be confirmed by larger multicentric studies.

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PST-FRANCE Company

ACR Plenary III

1950 Thursday, November 12, 1998, 8:45 AM–10:15 PM

THE EPIDEMIOLOGY OF RHEUMATOID ARTHRITIS (RA) IN ROCHESTER, MN, 1955 - 1985. Sherine E. Gabriel, Cynthia S. Crowson, W. Michael O'Fallon, Mayo Clinic, Rochester, MN 55905

We sought to describe trends in the epidemiology of RA in a population-based cohort over 30 years.

Using the population-based data resources of the Rochester Epidemiology Project, an inception cohort of all cases of RA first diagnosed between 1/1/1955 and 1/1/1985 among Rochester, Minnesota residents ≥ 35 years of age was assembled. The complete (inpatient and outpatient) medical record for each potential case was reviewed and confirmation or rejection of the diagnosis was accomplished based on the 1987 ACR diagnostic criteria for RA. Follow-up for all cases continued until January 1, 1995. Age- and sex-specific incidence rates were calculated using the number of incident cases as the numerator and population estimates as the denominator. Incidence rates were age- and sex-adjusted to 1970 U.S. white population. Prevalence was estimated on January 1, 1985. A birth cohort analysis was performed by calculating and comparing incidence rates for each of 16 birth cohorts.

Of the 425 Rochester, MN residents who fulfilled the inclusion criteria, there were 113 (26.6%) males and 312 (73.4%) females, with an average age at diagnosis of 60.2 years and a mean follow-up time of 15.1 years. The overall age- and sex-adjusted annual incidence of RA among Rochester, MN residents ≥ 35 years of age (1955-1985) was 75.3 per 100,000 population (95% C.I.: 68.0, 82.5). This incidence was approximately double in women compared to men ($p < 0.0001$) and increased steadily with age until age 85 after which it decreased. Secular trends in the incidence of RA over the entire study period were demonstrated. The overall prevalence of RA on January 1, 1985 was approximately 1%. A birth cohort analysis showed peak incidence rates for the 1885 birth cohort among males and for the 1880 and 1890 cohorts among females.

The epidemiology of RA is dynamic. These findings lend further support to the hypothesis of a host/environment interaction in the pathogenesis of RA.

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