

Arthrose konservativ



Die konservative Therapie der Arthrose



P. Machacek

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Das Gespräch



Information und Aufklärung in regelmäßigen Abständen führt zu:

- Schmerzlinderung
- Verbesserung der Lebensqualität

Arthritis Rheum. 1997 Aug;40(8):1466-74.
Effects of self-care education on the health status of inner-city patients with osteoarthritis of the knee.
Mazzuca SA, Brandt MD, Katz RB, Chambers M, Rost D, Hannon M.

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft
- Take Home

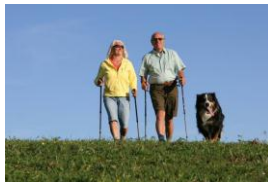
Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



„life style changes“

- Aktivität
- Gewichtsreduktion
- Orthesen



Ann Rheum Dis. 2013 Jul;72(7):1125-35.
EULAR recommendations for the non-pharmacological core management of hip and knee osteoarthritis.
Lorenzetti B, Hagen H, Bekker M, Andersson G, Christensen P, Gonzalez G, Gohari M, Guzman S, Harrold A, Kahan J, Lohmander LS, Lund H, Mallen C, Nava S, Oliver S, Pavlou S, Pitsillides A, de Siqueira J, de la Torre J, Guedes V, Hietalahti T, European League Against Rheumatism (EULAR).

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Physiotherapie

- Kräftigung
- Bewegungsübungen
- Koordinationstraining
- Achsentraing



J Rheumatol. 2001 Jan;28(1):156-64.
Physical therapy is effective for patients with osteoarthritis of the knee: a randomized controlled clinical trial.
Franklin M, Coombs J, Etkin PL.

Osteoarthritis Cartilage. 2008 Feb;16(2):137-62.
OARSI recommendations for the management of hip and knee osteoarthritis, Part II: OARSI evidence-based, expert consensus guidelines.
Zhang W, Moskowitz RW, Nuij G, Abramson S, Altman RD, Arden N, Bierma-Zinno S, Brandt MD, Croft D, Doherty M, Dougados M, Hochberg M, Hurst D, Kanch S, Leuninger LB, Tugwell P.

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



- Wärme



- TENS



- Kryotherapie



- Akupunktur



- Grundlagen
- Physikalische Therapie**
- Medikamente
- Zukunft
- Take Home

Osteoarthritis Cartilage. 2010 Apr;18(4):476-99.
OARSI recommendations for the management of hip and knee osteoarthritis: part II: Changes in evidence following systematic cumulative update of research published through January 2009.
Zhang W, Niu G, Moskowitz RW, Abramson S, Altman RD, Arden NK, Bierma-Zinno S, Brandt KD, Cross P, Doherty M, Dougados M, Hochberg RC, Hunter SK, Jones G, Leuninger LB, Travençolo P

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



GERAC (German Acupuncture)



Ergebnis:

die **Wirksamkeit beider Akupunkturformen war wesentlich besser als die Standardtherapie**

die **Wirksamkeit von TCM und Sham waren nahezu ident**

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Denervierung



- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft
- Take Home

PMJ. 2011 Mar;15(2):481-7.
Radiofrequency treatment relieves chronic knee osteoarthritis pain: a double-blind randomized controlled trial.
Choi WJ, Hwang SJ, Song JC, Lee SH, Park YU, Park HS, Song JW.

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



NSAIDs & Coxibe



- Diclofenac und Coxibe erhöhen MCI- und Insultrisiko um 1/3
- Ibuprofen: erhöhte coronare Komplikationen
- alle NSAIDs erhöhen Rate an GI-Komplikationen
- alle NSAIDs verdoppeln Rate an Herzinsuffizienz
- Naproxen: am wenigsten tödliche Gefäßkomplikationen

- Grundlagen
- Physikalische Therapie
- Medikamente**
- Zukunft
- Take Home

Lancet. 2013 Aug 31;382(9894):769-79. Vascular and upper gastrointestinal effects of non-steroidal anti-inflammatory drugs: meta-analyses of individual participant data from randomised trials.
Cohen and International NSAIDs Tolerability (INTIT) Collaborators. Bawa N, Emberson J, Valleron A, Altman D, Bello J, Bouillon L, Cavazzoni P, Edwards R, Emberson G, Gao P, Guo H, Hlatky M, Iqbal R, Iqbal S, Iqbal T, Iqbal U, Iqbal V, Iqbal W, Iqbal X, Iqbal Y, Iqbal Z, Iqbal AA, Iqbal AB, Iqbal AC, Iqbal AD, Iqbal AE, Iqbal AF, Iqbal AG, Iqbal AH, Iqbal AI, Iqbal AJ, Iqbal AK, Iqbal AL, Iqbal AM, Iqbal AN, Iqbal AO, Iqbal AP, Iqbal AQ, Iqbal AR, Iqbal AS, Iqbal AT, Iqbal AU, Iqbal AV, Iqbal AW, Iqbal AX, Iqbal AY, Iqbal AZ, Iqbal BA, Iqbal BB, Iqbal BC, Iqbal BD, Iqbal BE, Iqbal BF, Iqbal BG, Iqbal BH, Iqbal BI, Iqbal BJ, Iqbal BK, Iqbal BL, Iqbal BM, Iqbal BN, Iqbal BO, Iqbal BP, Iqbal BQ, Iqbal BR, Iqbal BS, Iqbal BT, Iqbal BU, Iqbal BV, Iqbal BW, Iqbal BX, Iqbal BY, Iqbal BZ, Iqbal CA, Iqbal CB, Iqbal CC, Iqbal CD, Iqbal CE, Iqbal CF, Iqbal CG, Iqbal CH, Iqbal CI, Iqbal CJ, Iqbal CK, Iqbal CL, Iqbal CM, Iqbal CN, Iqbal CO, Iqbal CP, Iqbal CQ, Iqbal CR, Iqbal CS, Iqbal CT, Iqbal CU, Iqbal CV, Iqbal CW, Iqbal CX, Iqbal CY, Iqbal CZ, Iqbal DA, Iqbal DB, Iqbal DC, Iqbal DD, Iqbal DE, Iqbal DF, Iqbal DG, Iqbal DH, Iqbal DI, Iqbal DJ, Iqbal DK, Iqbal DL, Iqbal DM, Iqbal DN, Iqbal DO, Iqbal DP, Iqbal DQ, Iqbal DR, Iqbal DS, Iqbal DT, Iqbal DU, Iqbal DV, Iqbal DW, Iqbal DX, Iqbal DY, Iqbal DZ, Iqbal EA, Iqbal EB, Iqbal EC, Iqbal ED, Iqbal EE, Iqbal EF, Iqbal EG, Iqbal EH, Iqbal EI, Iqbal EJ, Iqbal EK, Iqbal EL, Iqbal EM, Iqbal EN, Iqbal EO, Iqbal EP, Iqbal EQ, Iqbal ER, Iqbal ES, Iqbal ET, Iqbal EU, Iqbal EV, Iqbal EW, Iqbal EX, Iqbal EY, Iqbal EZ, Iqbal FA, Iqbal FB, Iqbal FC, Iqbal FD, Iqbal FE, Iqbal FF, Iqbal FG, Iqbal FH, Iqbal FI, Iqbal FJ, Iqbal FK, Iqbal FL, Iqbal FM, Iqbal FN, Iqbal FO, Iqbal FP, Iqbal FQ, Iqbal FR, Iqbal FS, Iqbal FT, Iqbal FU, Iqbal FV, Iqbal FW, Iqbal FX, Iqbal FY, Iqbal FZ, Iqbal GA, Iqbal GB, Iqbal GC, Iqbal GD, Iqbal GE, Iqbal GF, Iqbal GG, Iqbal GH, Iqbal GI, Iqbal GJ, Iqbal GK, Iqbal GL, Iqbal GM, Iqbal GN, Iqbal GO, Iqbal GP, Iqbal GQ, Iqbal GR, Iqbal GS, Iqbal GT, Iqbal GU, Iqbal GV, Iqbal GW, Iqbal GX, Iqbal GY, Iqbal GZ, Iqbal HA, Iqbal HB, Iqbal HC, Iqbal HD, Iqbal HE, Iqbal HF, Iqbal HG, Iqbal HH, Iqbal HI, Iqbal HJ, Iqbal HK, Iqbal HL, Iqbal HM, Iqbal HN, Iqbal HO, Iqbal HP, Iqbal HQ, Iqbal HR, Iqbal HS, Iqbal HT, Iqbal HU, Iqbal HV, Iqbal HW, Iqbal HX, Iqbal HY, Iqbal HZ, Iqbal IA, Iqbal IB, Iqbal IC, Iqbal ID, Iqbal IE, Iqbal IF, Iqbal IG, Iqbal IH, Iqbal II, Iqbal IJ, Iqbal IK, Iqbal IL, Iqbal IM, Iqbal IN, Iqbal IO, Iqbal IP, Iqbal IQ, Iqbal IR, Iqbal IS, Iqbal IT, Iqbal IU, Iqbal IV, Iqbal IW, Iqbal IX, Iqbal IY, Iqbal IZ, Iqbal JA, Iqbal JB, Iqbal JC, Iqbal JD, Iqbal JE, Iqbal JF, Iqbal JG, Iqbal JH, Iqbal JI, Iqbal JJ, Iqbal JK, Iqbal JL, Iqbal JM, Iqbal JN, Iqbal JO, Iqbal JP, Iqbal JQ, Iqbal JR, Iqbal JS, Iqbal JT, Iqbal JU, Iqbal JV, Iqbal JW, Iqbal JX, Iqbal JY, Iqbal JZ, Iqbal KA, Iqbal KB, Iqbal KC, Iqbal KD, Iqbal KE, Iqbal KF, Iqbal KG, Iqbal KH, Iqbal KI, Iqbal KJ, Iqbal KL, Iqbal KM, Iqbal KN, Iqbal KO, Iqbal KP, Iqbal KQ, Iqbal KR, Iqbal KS, Iqbal KT, Iqbal KU, Iqbal KV, Iqbal KW, Iqbal KX, Iqbal KY, Iqbal KZ, Iqbal LA, Iqbal LB, Iqbal LC, Iqbal LD, Iqbal LE, Iqbal LF, Iqbal LG, Iqbal LH, Iqbal LI, Iqbal LJ, Iqbal LK, Iqbal LL, Iqbal LM, Iqbal LN, Iqbal LO, Iqbal LP, Iqbal LQ, Iqbal LR, Iqbal LS, Iqbal LT, Iqbal LU, Iqbal LV, Iqbal LW, Iqbal LX, Iqbal LY, Iqbal LZ, Iqbal MA, Iqbal MB, Iqbal MC, Iqbal MD, Iqbal ME, Iqbal MF, Iqbal MG, Iqbal MH, Iqbal MI, Iqbal MJ, Iqbal MK, Iqbal ML, Iqbal MM, Iqbal MN, Iqbal MO, Iqbal MP, Iqbal MQ, Iqbal MR, Iqbal MS, Iqbal MT, Iqbal MU, Iqbal MV, Iqbal MW, Iqbal MX, Iqbal MY, Iqbal MZ, Iqbal NA, Iqbal NB, Iqbal NC, Iqbal ND, Iqbal NE, Iqbal NF, Iqbal NG, Iqbal NH, Iqbal NI, Iqbal NJ, Iqbal NK, Iqbal NL, Iqbal NM, Iqbal NN, Iqbal NO, Iqbal NP, Iqbal NQ, Iqbal NR, Iqbal NS, Iqbal NT, Iqbal NU, Iqbal NV, Iqbal NW, Iqbal NX, Iqbal NY, Iqbal NZ, Iqbal OA, Iqbal OB, Iqbal OC, Iqbal OD, Iqbal OE, Iqbal OF, Iqbal OG, Iqbal OH, Iqbal OI, Iqbal OJ, Iqbal OK, Iqbal OL, Iqbal OM, Iqbal ON, Iqbal OO, Iqbal OP, Iqbal OQ, Iqbal OR, Iqbal OS, Iqbal OT, Iqbal OU, Iqbal OV, Iqbal OW, Iqbal OX, Iqbal OY, Iqbal OZ, Iqbal PA, Iqbal PB, Iqbal PC, Iqbal PD, Iqbal PE, Iqbal PF, Iqbal PG, Iqbal PH, Iqbal PI, Iqbal PJ, Iqbal PK, Iqbal PL, Iqbal PM, Iqbal PN, Iqbal PO, Iqbal PP, Iqbal PQ, Iqbal PR, Iqbal PS, Iqbal PT, Iqbal PU, Iqbal PV, Iqbal PW, Iqbal PX, Iqbal PY, Iqbal PZ, Iqbal QA, Iqbal QB, Iqbal QC, Iqbal QD, Iqbal QE, Iqbal QF, Iqbal QG, Iqbal QH, Iqbal QI, Iqbal QJ, Iqbal QK, Iqbal QL, Iqbal QM, Iqbal QN, Iqbal QO, Iqbal QP, Iqbal QQ, Iqbal QR, Iqbal QS, Iqbal QT, Iqbal QU, Iqbal QV, Iqbal QW, Iqbal QX, Iqbal QY, Iqbal QZ, Iqbal RA, Iqbal RB, Iqbal RC, Iqbal RD, Iqbal RE, Iqbal RF, Iqbal RG, Iqbal RH, Iqbal RI, Iqbal RJ, Iqbal RK, Iqbal RL, Iqbal RM, Iqbal RN, Iqbal RO, Iqbal RP, Iqbal RQ, Iqbal RR, Iqbal RS, Iqbal RT, Iqbal RU, Iqbal RV, Iqbal RW, Iqbal RX, Iqbal RY, Iqbal RZ, Iqbal SA, Iqbal SB, Iqbal SC, Iqbal SD, Iqbal SE, Iqbal SF, Iqbal SG, Iqbal SH, Iqbal SI, Iqbal SJ, Iqbal SK, Iqbal SL, Iqbal SM, Iqbal SN, Iqbal SO, Iqbal SP, Iqbal SQ, Iqbal SR, Iqbal SS, Iqbal ST, Iqbal SU, Iqbal SV, Iqbal SW, Iqbal SX, Iqbal SY, Iqbal SZ, Iqbal TA, Iqbal TB, Iqbal TC, Iqbal TD, Iqbal TE, Iqbal TF, Iqbal TG, Iqbal TH, Iqbal TI, Iqbal TJ, Iqbal TK, Iqbal TL, Iqbal TM, Iqbal TN, Iqbal TO, Iqbal TP, Iqbal TQ, Iqbal TR, Iqbal TS, Iqbal TT, Iqbal TU, Iqbal TV, Iqbal TW, Iqbal TX, Iqbal TY, Iqbal TZ, Iqbal UA, Iqbal UB, Iqbal UC, Iqbal UD, Iqbal UE, Iqbal UF, Iqbal UG, Iqbal UH, Iqbal UI, Iqbal UJ, Iqbal UK, Iqbal UL, Iqbal UM, Iqbal UN, Iqbal UO, Iqbal UP, Iqbal UQ, Iqbal UR, Iqbal US, Iqbal UT, Iqbal UU, Iqbal UV, Iqbal UW, Iqbal UX, Iqbal UY, Iqbal UZ, Iqbal VA, Iqbal VB, Iqbal VC, Iqbal VD, Iqbal VE, Iqbal VF, Iqbal VG, Iqbal VH, Iqbal VI, Iqbal VJ, Iqbal VK, Iqbal VL, Iqbal VM, Iqbal VN, Iqbal VO, Iqbal VP, Iqbal VQ, Iqbal VR, Iqbal VS, Iqbal VT, Iqbal VU, Iqbal VV, Iqbal VW, Iqbal VX, Iqbal VY, Iqbal VZ, Iqbal WA, Iqbal WB, Iqbal WC, Iqbal WD, Iqbal WE, Iqbal WF, Iqbal WG, Iqbal WH, Iqbal WI, Iqbal WJ, Iqbal WK, Iqbal WL, Iqbal WM, Iqbal WN, Iqbal WO, Iqbal WP, Iqbal WQ, Iqbal WR, Iqbal WS, Iqbal WT, Iqbal WU, Iqbal WV, Iqbal WW, Iqbal WX, Iqbal WY, Iqbal WZ, Iqbal XA, Iqbal XB, Iqbal XC, Iqbal XD, Iqbal XE, Iqbal XF, Iqbal XG, Iqbal XH, Iqbal XI, Iqbal XJ, Iqbal XK, Iqbal XL, Iqbal XM, Iqbal XN, Iqbal XO, Iqbal XP, Iqbal XQ, Iqbal XR, Iqbal XS, Iqbal XT, Iqbal XU, Iqbal XV, Iqbal XW, Iqbal XX, Iqbal XY, Iqbal XZ, Iqbal YA, Iqbal YB, Iqbal YC, Iqbal YD, Iqbal YE, Iqbal YF, Iqbal YG, Iqbal YH, Iqbal YI, Iqbal YJ, Iqbal YK, Iqbal YL, Iqbal YM, Iqbal YN, Iqbal YO, Iqbal YP, Iqbal YQ, Iqbal YR, Iqbal YS, Iqbal YT, Iqbal YU, Iqbal YV, Iqbal YW, Iqbal YX, Iqbal YY, Iqbal YZ, Iqbal ZA, Iqbal ZB, Iqbal ZC, Iqbal ZD, Iqbal ZE, Iqbal ZF, Iqbal ZG, Iqbal ZH, Iqbal ZI, Iqbal ZJ, Iqbal ZK, Iqbal ZL, Iqbal ZM, Iqbal ZN, Iqbal ZO, Iqbal ZP, Iqbal ZQ, Iqbal ZR, Iqbal ZS, Iqbal ZT, Iqbal ZU, Iqbal ZV, Iqbal ZW, Iqbal ZX, Iqbal ZY, Iqbal ZZ.

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

NSAIDs & Coxibe



Diclofenac

Stellungnahme der Österreichischen Schmerzgesellschaft (ÖSG)

- **Kontraindikationen:** koronare Herzkrankheit, cerebrovaskuläre Erkrankung, periphere arterielle Erkrankung, Herzinsuffizienz der NYHA Klassifizierung II-IV
- **sorgfältige Abwägung:** Diabetes mellitus, Hypertonie, Hyperlipidämie, Nikotinabusus
- **keine Langzeitanwendung**

Ausbildungsseminar konservative Orthopädie Juni 2014

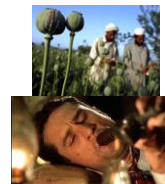
Arthrose konservativ



Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

Opioide

- cave NW:
- **Obstipation**
 - **Übelkeit**
 - **Atemdepression**



[Open Rheumatol J. 2012;6:320-30. doi: 10.2174/187431290120610320. Epub 2012 Dec 13. Pain treatment in arthritis-related pain: beyond NSAIDs.](#)
[van Laar M, Barends AV Jr, Mollema HJ, Marcora M, Nalimachu S, O'Brien J, Parrot S, Salfra SB](#)

[Arthritis Res Ther. 2005;7\(5\):193-4. Epub 2005 Aug 25. Opioids for non-operable osteoarthritis and soft-tissue rheumatism. Nicholson DJ.](#)

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ

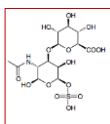


Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

SADOA (slow acting drugs in osteoarthritis)

Chondroitinsulfat

800mg/Tag !



[Curr Med Res Opin. 2013 Mar;29\(3\):259-67. Symptom and structure modification in osteoarthritis with pharmaceutical-grade chondroitin sulfate: what's the evidence? Huisman M, Chevalier X, Herrero V, Hunter DJ, Uebelhart D.](#)

[Ann Rheum Dis. 2011 Jun;70\(6\):882-9. Chondroitin sulphate reduces both cartilage volume loss and bone marrow lesions in knee osteoarthritis patients starting as early as 6 months after initiation of therapy: a randomised, double-blind, placebo-controlled pilot study using MRI. Weil LM, Szynald JP, Martel-Pelletier J, Beaudou A, Bessette L, Moiré F, Abram F, Dorais M, Pelletier JP.](#)

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ

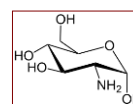


Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

SADOA (slow acting drugs in osteoarthritis)

Glucosamin

> 1500mg/Tag !



[Arthritis Rheum. 2008 Oct;58\(10\):3183-91. The effect of glucosamine and/or chondroitin sulfate on the progression of knee osteoarthritis: a report from the glucosamine/chondroitin arthritis intervention trial. Swales AD, Shi JY, Eppes MP, Dunbar PD, Bingham CO 3rd, Harris CL, Singer NG, Bandy JD, Silver D, Jackson CG, Lane NE, Oatis CV, Wolfe F, Hesse J, Furst DE, Cohen DA, Moskowitz RW, Williams DA, Clegg DO.](#)

[Arthritis Res Ther. 2012 Jan;30:1411-201. Is there any scientific evidence for the use of glucosamine in the management of human osteoarthritis? Herrero V, Vekicic M, Hunter DJ.](#)

[Curr Rheumatol Rep. 2013 Oct;15\(10\):361. Chondroitin and glucosamine in the management of osteoarthritis: an update. Herrero V, Lambert C.](#)

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ

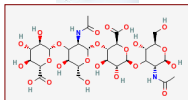


SADOA (slow acting drugs in osteoarthritis)

Hyaluronsäure



- viskoelastisch
- antiinflammatorisch



[Eur J Orthop Surg Traumatol](#). 2013 Feb;23(2):119-24.
Viscosupplementation with hyaluronic acid in the treatment for cartilage lesions: a review of current evidence and future directions.
Chen TS, Colton D, Moadrid G.

[Cochrane Database Syst Rev](#). 2008 Apr 19(2).
Viscosupplementation for the treatment of osteoarthritis of the knee.
Bennell K, Campbell J, Robinson J, Grae T, Bourne R, Wells G.

Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

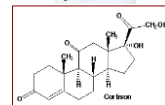
Arthrose konservativ



Glucocorticoide



- schmerzstillend
- antiinflammatorisch
- Wirkung bis zu 3 Wochen



Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

[Cochrane Database Syst Rev](#). 2006 Apr 19(2):CD005208.
Intraarticular corticosteroid for treatment of osteoarthritis of the knee.
Adnan N, Campbell J, Robinson J, Grae T, Bourne R, Wells G.

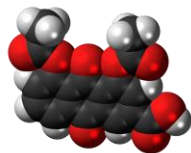
Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Diacerein

IL-1 Hemmer auf pflanzlicher Basis



[Arch Intern Med](#). 2008 Sep 20;168(17):1889-906.
A meta-analysis of controlled clinical studies with diacerein in the treatment of osteoarthritis.
Hosono S, Nakamura K, Leeb BF.

[Cochrane Database Syst Rev](#). 2006 Jan 25(1):CD005117.
Diacerein for osteoarthritis.
Fidick TS, Soares BC, Trevisan VF.

Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



autolog konditioniertes Serum/Plasma



[Osteoarthritis Cartilage](#). 2009 Feb;17(2):152-60.
Autologous conditioned serum (Orthokine) is an effective treatment for knee osteoarthritis.
Shawcross M, Moore G, Anderson G, Knapton S.

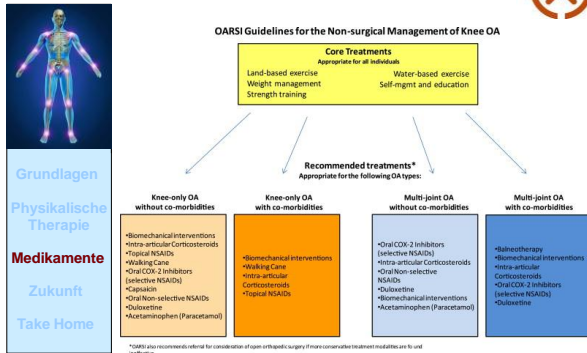
[Osteoarthritis Cartilage](#). 2008 Apr;16(4):498-505. Epub 2007 Sep 6.
Autologous interleukin-1 receptor antagonist improves function and symptoms in osteoarthritis when compared to placebo in a prospective randomized controlled trial.
Zhang QH, Eastwood MA, Robinson SD, Wang JH, Pak JH, Williams WJ, Zia JA, Verbruggen AJ, Dierckx WJ, Serebik D.

[Am J Sports Med](#). 2012 Dec;40(12):2822-7.
Comparison between hyaluronic acid and platelet-rich plasma, intra-articular infiltration in the treatment of gonarthrosis.
Lopez E, Saini S, Carracino A, Di Vito J, Schiavella V, Piccola A, De Renzi G, Cuffredo M.

Grundlagen
Physikalische Therapie
Medikamente
Zukunft
Take Home

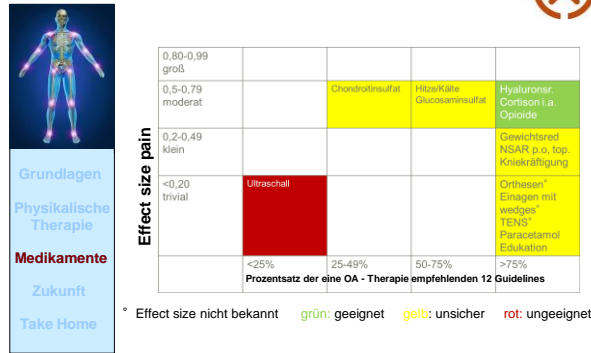
Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ

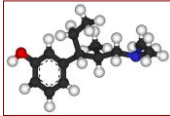


Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Tapentadol



- Agonist am μ -Opioidrezeptor
- selektiver NA-WA Hemmer

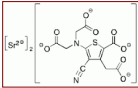
Clin. Drug Invest. 2013 Sep;33(9):807-19. Effectiveness and tolerability of tapentadol prolonged release compared with prior opioid therapy for the management of severe, chronic osteoarthritis pain. [Bismontani S, Smeraldi G, Sabini V, Gattuso P, Gallo G, Trapani G](#)

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Strontium



Strontiumranelat

Ann. Rheum. Dis. 2013 Feb;72(2):179-86. Efficacy and safety of strontium ranelate in the treatment of knee osteoarthritis: results of a double-blind, randomised placebo-controlled trial. [Boonen A, Bredius J, Blijleven J, Bouter L, Bouter W, Chavakis S, Chevalier X, Christensen C, Gagnat S, Navarro F, Navarro J, Sanchis-Bell S, Spector TD, van't Hofe G](#)

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Soja



Rheumatology (Oxford). 2013 Jul 52(7):1303-12.
 A multicentre, randomized, placebo- and active-controlled trial comparing the efficacy and safety of topical ketoprofen in Transderome gel (DCEA-033) with ketoprofen-free vehicle (TD1-064) and oral celecoxib for knee pain associated with osteoarthritis.
 Conaghan PG, Becker J, Bollen W, Laro G, Rohrer M.
Phytother Res. 2009 Nov 23(11):1497-515. doi: 10.1002/ptr.3007.
 Evidence of effectiveness of herbal medicinal products in the treatment of arthritis. Part I: Osteoarthritis.
 Gombrowski S, Gombrowski J, Kuhn CV, Pirmosek JJ, Henschel A, Trukenbrod S.

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft**
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



gepulste Radiofrequenztherapie

Pain Pract. 2013 Apr 8.
 Transcutaneous Pulsed Radiofrequency Treatment for Patients with Shoulder Pain Booked for Surgery: A Double-Blind, Randomized Controlled Trial.
 Tashiro M, Lovgren LF.

Spandan J (Eds). 2011 December; 24(4)
 Intrarticular Pulsed Mode Radiofrequency Lesioning of Glenohumeral Joint in Chronic Shoulder Pain: 3 Cases
 Empire Orthopaed, Onat, Alyol, Alkan, Aickler, Ullrich, Schmitt

Kernspinresonanztherapie

J Back Musculos Rehabil. 2013;26(1):93-104.
 One-year-survey with multicenter data of more than 4,500 patients with degenerative rheumatic diseases treated with therapeutic nuclear magnetic resonance.
 Kuhn CV, Gombrowski S, Gombrowski J.

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft**
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Stammzellentherapie



Curr Pharm Des. 2011;17(4):322-9.
 Adipose-derived stromal/stem cells (ASC) in regenerative medicine: pharmaceutical applications.
 Choleba JT, Nunez ME.
Stem Cell Res. 2013 Sep 11(2):834-44.
 Adipose mesenchymal stem cells protect chondrocytes from degeneration associated with osteoarthritis.
 Matsuura M, Morimoto G, Tsumaki K, Yamamoto JB, Ferrara B, Esposito A, Gohongi E, Braun D, Arnesen G, Lippold C, Iwata D.
Osteoarthritis Cartilage. 2013 Jul 4.
 Safety of intra-articular cell-therapy with culture-expanded stem cells in humans: a systematic literature review.
 Pitschke CM, Lepp M, Bergman M, van Oorschot GJ, Saeed PS.
Cell Transplant. 2013;22(8):1395-408.
 Intra-articular Delivery of Purified Mesenchymal Stem Cells From C57BL/6 or MR1Mpl Superhealer Mice Prevents Posttraumatic Arthritis.
 Dickinson BC, Wu LC, Lovelace CB, Furman BD, Hrabec A, Scola JB, Olson SA, Clark C.
Wien Med Wochenschr. 2013 Aug 16. Percutaneous injection of autologous, culture-expanded mesenchymal stem cells into carpalometacarpal hand joints: a case series with an untreated comparison group.
 J Carraro C, D Freeman M.

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft**
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014

Arthrose konservativ



Take Home Message



- gute Evidenz für:**
- „life style changes“
 - Physiotherapie, physikalische Maßnahmen
 - NSAIDs, Corticosteroide, Hyaluronsäure
- Die angewendeten Verfahren orientieren sich neben dem Grad der Gelenksdestruktion vornehmlich an der Symptomatik

- Grundlagen
- Physikalische Therapie
- Medikamente
- Zukunft**
- Take Home

Ausbildungsseminar konservative Orthopädie Juni 2014