

## Rose hip extract preparation – New research results in humans

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### Traditional use

Ordinary rose hips (spurious fruits of *Rosa canina* L.) were used as typical foodstuff to substitute Vitamin C and herewith to prevent or cure common cold diseases. Nowadays a secondary application of rose hips is found, as remedy for anti-inflammatory diseases [1], especially against arthritic pain. Previous in-vitro studies concern with cytokine- or matrix metalloproteinases- inhibition capacities [2]. Also long time intake (>12 weeks) of collagen hydrolysates (10 g/day) were known to help arthritic patients [3]. As investigators found, there could be realized a synergistic effect, using collagen hydrolysate and rose hip extract simultaneously [4,5]. Dose-finding refers to these last mentioned studies, where half of single dosage, respectively half of single dosage equivalent, seems to be effective enough.

### Study – hypothesis & design

Starting hypothesis was, that the investigated combination "jointsol" – a purified aqueous rose hip extract together with collagen hydrolysate – is able to reduce arthritic pain and to enable patients to reduce conventional medicine like NSAIDs or opioids, and to do this faster, than the single ingredients could.

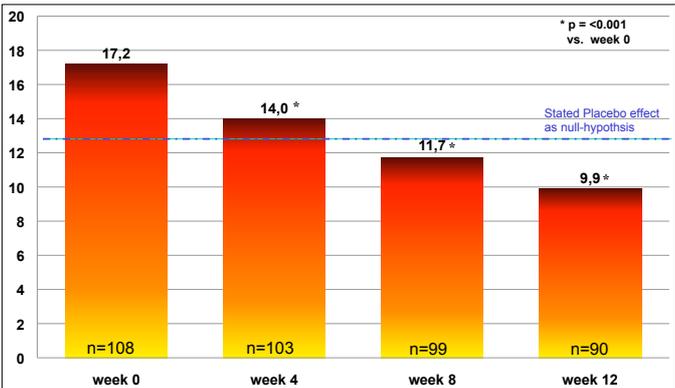
Therefore a 12-week non-interventional uncontrolled observational multicenter human study (n=108) on patients with osteoarthritis (clinically and radiologically verified) was done, with instant rose hip extract preparation jointsol®, which is commercial available in Spanish health food markets. Each jointsol® sachet contains 0.5g of purified aqueous rose hip extract, as well as 5g collagen hydrolysate as active ingredients, additionally with sugar, sweeteners, ascorbic acid and aroma components.



### Study population

The study population was characterized by predominantly overweight (Ø 80,2 kg @ Ø 167,9 cm) females (70,4%). They were all above 50 years old (Ø 65,4 years) with uni- or bilateral gonarthrosis. The level of Gonarthrosis acc. Jäger and Wirth [6] was categorized between 1 and 2 (19,3% vs. 80,7%) on knee joints.

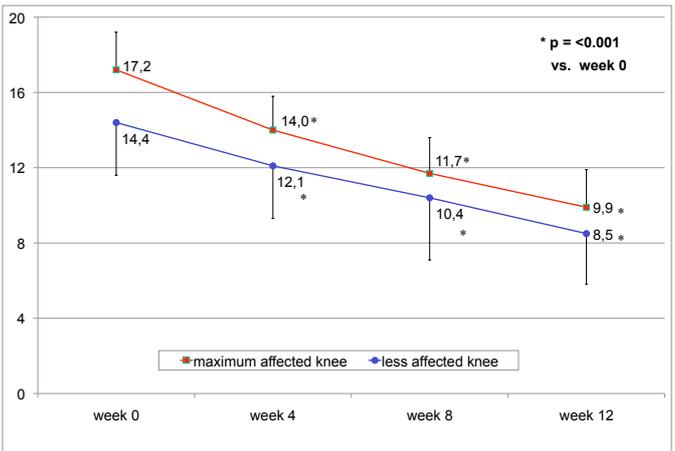
### WOMAC pain score I



The study hypothesis for the WOMAC-pain-score in the maximum affected knee was confirmed after 8 weeks. During the whole time of the study, the intake of NSAIDs and other pain medicaments could be reduced by 15.5% of the medicated patients.

### WOMAC pain score II

As well as primary parameter „pain“ is positively influenced on maximum affected knee, on the less affected knee WOMAC pain score is reduced parallel:



### Secondary Parameters

Following other parameters were also positively influenced:

Parameters	Baseline	Final Visit
1. Radiographic deformations	91,7%	55,1%
1.1 Diminished joint space in maximum affected knee	80,6%	48,3%
1.2 Diminished joint space in less affected knee	30,6%	19,1%
1.3 Osteochondrosis in maximum affected knee	63,0%	29,2%
1.4 Osteochondrosis in less affected knee	25,0%	10,1%
2. Goniometry (normal-null-method)		
2.1 Flexion in maximum affected knee	121,2°	124,2°
2.2 Flexion in less affected knee	127,1°	129,2°
3.1 Morning stiffness in maximum affected knee	73,6%	53,6%
3.2 Morning stiffness in maximum affected knee	34,1%	25,8%
3.3 Impaired Movement in maximum affected knee	57,7%	32,6%
3.4 Impaired Movement in maximum affected knee	25,9%	12,3%

### Summary

This first human study on this combination product confirmed our former in-vitro data. The new rose hip preparation shortens time of effect occurrence for human applicants for 4 weeks minimum, in comparison to pure collagen hydrolysate (12-24 weeks) or to rose hip powder (12 weeks). As main result can also be identified that 79.8% felt good or very good at the end of this study (assessment by probands). Further studies will be needed for scientific confirmation, either for pharmaceutical or nutritional claims.

### Literature

- [1] The evidence for clinical efficacy of rose hip and seed: a systematic review, *Phytother. Res.* 20, 1–3 (2006) C. Chrubasik et al.
- [2] Poster: A new refined Rose hip extract and its anti-arthritic potential, 7. Kongress Phytopharmaka und Phytotherapie – Forschung und Praxis – 10-12. September 2009 Berlin, B. Walbroel, B. Feistel
- [3] Role of collagen hydrolysate in bone and joint disease - Seminars in arthritis and rheumatism 30 (2): 87–99, R.W. Moskowitz
- [4] World congress of Osteoarthritis, 23-26. September 2010, Brussels, M. Schunck, S. Oesser
- [5] Preparations with rosehip extracts and method of producing rosehip extracts, WO2009080778
- [6] *Praxis der Orthopädie*, 2. Aufl. Thieme, Stuttgart, New York, 1992, M. Jäger, C. J. Wirth