

Collected Scientific Research Relating to the Use of Osteopathy with Gastro-intestinal symptoms (including constipation, diarrhoea and irritable bowel syndrome)

Important:

1) Osteopathy involves helping people's own self-healing abilities to work better, rather than focussing primarily on particular conditions.

2) Each person is different, and osteopathy treats them differently.

Therefore people respond to osteopathic treatment in different ways. Treatments that work for one person cannot be guaranteed to work for another person in the same way. The fact that there is scientific research supporting a treatment in a group of people does not mean that it will always work in the same way (which is probably true of all research).

A number of things make research into osteopathy challenging. These include the two aspects of osteopathy mentioned above, and also the lack of major commercial interests to provide funding in expectation of financial returns. At the same time, there is an emerging body of research demonstrating the usefulness of osteopathic treatment.

More research is being done all of the time. I am not aware of any research which shows that osteopathic treatment, delivered by a qualified osteopath, is ineffective in relation to this area. If you are aware of any studies that show that, please bring them to my attention.

Please note: there is room for debate about the classifications used for these studies. Please let John Smartt know if you believe that any of these classifications are incorrect.

These studies are from peer-reviewed journals

Number
of studies:
18

Clinically and statistically significant results

Number
of studies:
18

Systematic reviews

Number of studies: 1

Müller A, Franke H, Resch KL, Fryer G 2014 **Effectiveness of osteopathic manipulative therapy for managing symptoms of irritable bowel syndrome: a systematic review.** *J Am Osteopath Assoc Jun;114(6):470-9* <http://www.ncbi.nlm.nih.gov/pubmed/24917634>

"The search identified 10 studies that examined OMTh for patients with IBS; 5 studies (204 patients) met the inclusion criteria. All studies were assessed as having low risk of bias according to the Cochrane Collaboration criteria, although there was heterogeneity in the outcome measures and control interventions."

"All studies reported more pronounced short-term improvements with OMTh compared with sham therapy or standard care only. These differences remained statistically significant after variable lengths of follow-up in 3 studies."

"The present systematic review provides preliminary evidence that OMTh may be beneficial in the treatment of patients with IBS."

Other reviews

Number of studies: 1

Collebrusco Luca, Lombardini Rita 2014 **What About OMT and Nutrition for Managing the Irritable Bowel Syndrome? An Overview and Treatment Plan** *EXPLORE: The Journal of Science and Healing Vol 10 (5) pages 309-318* <http://www.sciencedirect.com/science/article/pii/S1550830714001116>

"A chronic continuous or intermittent gastrointestinal tract dysfunction, the irritable bowel syndrome (IBS), appears to be due to dysregulation of brain–gut–microbiota communication. Furthermore, the “microbiota” greatly impacts the bi-directional brain–gut axis communication. This article describes IBS in relation to similar diseases, presents the background to osteopathy, and proposes osteopathic manipulative treatment (OMT) to manage IBS. In IBS, OMT focuses on the nervous and circulatory systems, spine, viscera, and thoracic and pelvic diaphragms in order to restore homeostatic balance, normalize autonomic activity in the intestine, promote lymphatic flow, and address somatic dysfunction. Lymphatic and venous congestion are treated by the lymphatic pump techniques and stimulation of Chapman’s reflex points. A simple treatment plan designed to lessen chronic pain and inflammation in IBS is presented based on current evidence-based literature. Since food itself, food allergies, and intolerance could contribute to symptom onset or even cause IBS, this article also provides dietary modifications to consider for patients."

Piche T, Pishvaie D, Tirouvaziam D, Filippi J, Dainese R, Tonohouhan M, DeGalleani L, Nébot-Vivinus MH, Payrouse JL, Hébuterne X. 2014 **Osteopathy decreases the severity of IBS-like symptoms associated with Crohn's disease in patients in remission.** *Eur J Gastroenterol Hepatol* Dec;26(12):1392-8 <https://www.ncbi.nlm.nih.gov/pubmed/25357218>

"Abstract

BACKGROUND:

Osteopathy may decrease the severity of irritable bowel syndrome (IBS). About 35% of patients with quiescent Crohn's disease (CD) continue to suffer from IBS-like symptoms with impaired quality of life (QoL). We aimed to evaluate the effect of osteopathy on the severity of IBS-like symptoms in quiescent CD patients.

METHODS:

We prospectively included 38 patients with CD on remission over 12 months while receiving infliximab every 8 weeks. Patients were randomized 2/ 1 to receive three sessions of standardized osteopathy (n=25) at 15, 30, and 45 days after the last infusion of infliximab or simple follow-up. The severity of IBS-like symptoms, psychological factors, and its impact on QoL were assessed using questionnaires.

MAIN RESULTS:

Compared with baseline, the severity of IBS-like symptoms was significantly reduced in patients receiving osteopathy. The decrease was significantly more pronounced in patients receiving osteopathy at day 30 [-38.4 (-76.1 to 10.2) vs. 32.2 (-16.6 to 41.6), P=0.01], day 45 [-36.7 (-74.4 to 25.3) vs. 32.2 (-16.6 to 41.6), P=0.04], and day 60 [-39.5 (-60.9 to -9.2) vs. 6.1 (-38.7 to 28.5), P=0.05] with a concomitant increase in QoL (P=0.09 at day 30, P=0.02 at day 45, P=0.3 at day 60). Compared with baseline, the severity of fatigue was significantly reduced in patients receiving osteopathy, whereas depression and anxiety remained unchanged.

CONCLUSION:

Three sessions of osteopathy reduced the severity of IBS-like symptoms associated with CD in remission. Osteopathy should be viewed as a helpful therapeutic option to reduce the severity of abdominal pain and discomfort in patients with CD but in remission with IBS-like symptoms."

da Silva RC, de Sá CC, Pascual-Vaca ÁO, de Souza Fontes LH, Herbella Fernandes FA, Dib RA, Blanco CR, Queiroz RA, Navarro-Rodriguez T. 2013 **Increase of lower esophageal sphincter pressure after osteopathic intervention on the diaphragm in patients with gastroesophageal reflux.** *Dis Esophagus* Jul;26(5):451-6 <http://www.ncbi.nlm.nih.gov/pubmed/22676647>

"The treatment of gastroesophageal reflux disease may be clinical or surgical. The clinical consists basically of the use of drugs; however, there are new techniques to complement this treatment, osteopathic intervention in the diaphragmatic muscle is one these. The objective of the study is to compare pressure values in the examination of esophageal manometry of the lower esophageal sphincter (LES) before and immediately after osteopathic intervention in the diaphragm muscle. Thirty-eight patients with gastroesophageal reflux disease - 16 submitted to sham technique and 22 submitted osteopathic technique - were randomly selected. The average respiratory pressure (ARP) and the maximum expiratory pressure (MEP) of the LES were measured by manometry before and after osteopathic technique at the point of highest pressure. Statistical analysis was performed using the Student's t-test and Mann-Whitney, and magnitude of the technique proposed was measured using the Cohen's index. Statistically significant difference in the osteopathic technique was found in three out of four in relation to the group of patients who performed the sham technique for the following measures of LES pressure: ARP with P= 0.027. The MEP had no statistical difference (P= 0.146). The values of Cohen d for the same measures were: ARP with d= 0.80 and MEP d= 0.52. Osteopathic manipulative technique produces a positive increment in the LES region soon after its performance."

Duncan B, Barton L, Edmonds D, Blashill BM 2004 **Parental perceptions of the therapeutic effect from osteopathic manipulation or acupuncture in children with spastic cerebral palsy.** Clin Pediatr (Phila) <https://www.ncbi.nlm.nih.gov/pubmed/15118778>

"Fifty children were involved in a randomized, controlled trial to evaluate the effectiveness of either osteopathic manipulation or acupuncture as a 6-month therapeutic adjunct for children with spastic cerebral palsy. Exit interviews were used to obtain parental perceptions and form the basis of this report. Only 2 of 17 parents reported positive gains while their child was in a wait-list control period but all 17 reported gains while in the treatment phase of the study. Ninety-six percent (48 of 50) of the parents reported some improvement while their child was receiving treatments but the gains varied from child to child. The most frequent gains were seen in improvement in the use of arms or legs (61% and 68%) and more restful sleep (39% and 68%) in the osteopathic and the acupuncture groups, respectively. Improvement in mood and improved bowel function were also very common benefits noted by the parents in both groups."

Brice C, Mountford R 2000 **Study into the Efficacy of Osteopathic Treatment of Irritable Bowel Syndrome** British Osteopathic Journal XXII, pp23ff

"Osteopathy believes the body has the ability to heal itself, and treats dysfunction by manipulation. Treatment benefits the patient by providing relaxation, normalising extrinsic and intrinsic autonomic control mechanisms and relieving congestion. The primary purpose of this research was to compare the efficacy of osteopathic and allopathic treatment of irritable bowel syndrome (IBS) in a hospital environment. Forty IBS patients diagnosed by a gastroenterological consultant using the accepted Rome Criteria received either allopathic or osteopathic treatment. Their symptoms were assessed using a symptom diary before commencing treatment, six weeks and three months post treatment. Results indicate that osteopathic treatment was effective in the treatment of irritable bowel syndrome in both the short and long term. Also, that osteopathic treatment was significantly more effective than allopathic treatment of irritable bowel syndrome."

Attali TV, Bouchoucha M, Benamouzig R 2013 **Treatment of refractory irritable bowel syndrome with visceral osteopathy: short-term and long-term results of a randomized trial.** J Dig Dis Dec;14(12):654-61 <http://www.ncbi.nlm.nih.gov/pubmed/23981319>

"In total, 31 consecutive refractory IBS [irritable bowel syndrome] patients were prospectively included in a randomized, crossover placebo-controlled study. Qualitative evaluation of depression and four symptoms including constipation, diarrhea, abdominal distension and abdominal pain before and after each phase of the study were conducted using visual analog scales, measures of rectal sensitivity and colonic transit time. One year after the study, the assessment of symptoms was performed again in all patients."

"Visceral osteopathy was associated with a significant amelioration of self-reported diarrhea, abdominal distension and abdominal pain, while constipation did not change significantly after this therapy. It was also associated with decreased rectal sensitivity, presenting as an increase in threshold volume, constant sensation volume and maximum tolerable volume ($P < 0.001$). However, no significant evolution of rectal sensitivity was observed when patients underwent placebo manipulations. Modifications of depression and total or segmental colonic transit time were not observed. One year after the end of this trial, symptom scores of diarrhea, abdominal distension and abdominal pain were significantly lower than those at enrollment ($P < 0.05$)."

Hundscheid HW, Pepels MJ, Engels LG, Loffeld RJ. 2007 **Treatment of irritable bowel syndrome with osteopathy: results of a randomized controlled pilot study.** J Gastroenterol Hepatol Sep;22(9):1394-8 <http://www.ncbi.nlm.nih.gov/pubmed/17716344>

"Effective treatment for irritable bowel syndrome (IBS) is not yet available. Osteopathy is a manual treatment which relies on mobilizing and manipulating procedures in order to relieve complaints. In the present study, a randomized controlled trial was carried out to evaluate the effects of osteopathic treatment for IBS."pubmed

"Eligible IBS patients were randomized between osteopathy and standard care. Follow-up was 6 months and validated means of follow-up were used. After 1, 3 and 6 months an overall assessment of symptoms was noted and a symptom score was obtained on a 5-point Likert scale. Quality of life (QOL) was scored with the standardized IBSQOL 2000 questionnaire and the Functional Bowel Disorder Severity Index was used."

"Twenty patients were randomized into the osteopathy group (OG) and 19 patients were included in the standard care group (SCG). Sixty-eight percent of patients in the OG noted definite overall improvement in symptoms and 27% showed slight improvement. One patient (5%) was free of symptoms at the end of the study. In the SCG, 18% noted definite improvement, 59% showed slight improvement, and in 17% worsening of symptoms was present. The difference in change in overall symptomatic improvement was statistically significant in favor of the osteopathic treatment ($P < 0.006$)."

"Osteopathic therapy is a promising alternative in the treatment of patients with IBS. Patients treated with osteopathy overall did better, with respect to symptom score and QOL."

Florance BM, Frin G, Dainese R, Nébot-Vivinus MH, Marine Barjoan E, Marjoux S, Laurens JP, Payrouse JL, Hébuterne X, Piche T 2012 **Osteopathy improves the severity of irritable bowel syndrome: a pilot randomized sham-controlled study.** Eur J Gastroenterol Hepatol Aug;24(8):944-9 <http://www.ncbi.nlm.nih.gov/pubmed/22546751>

"We prospectively assigned 30 patients with IBS (23F, 7M, mean age 45.8 ± 16.4 years) fulfilling the Rome III criteria in a 2/1 ratio to receive either osteopathy or sham osteopathy. Two separate sessions were performed at a 7-day interval (days 0 and 7) with a further 3 weeks of follow-up (day 28). The primary outcome included at least a 25% improvement in the IBS severity score at day 7. The secondary outcomes included the impact of IBS on quality of life, psychological factors, and bowel habits."

"The severity of IBS decreased in both groups at days 7 and 28. At day 7, this decrease was significantly more marked in patients receiving osteopathy compared with those receiving the sham procedure (-32.2 ± 29.1 vs. -9.0 ± 16.0 , mean difference normalized to the baseline $P=0.01$). This difference did not persist at day 28 ($P=0.4$). Both anxiety and depression scores decreased without difference between groups. Stool frequency and consistency were not significantly modified."

"Osteopathy improves the severity of IBS symptoms and its impact on quality of life."

Case controlled studies

Number of studies: 1

Crow WT, Gorodinsky L, 2009 **Does osteopathic manipulative treatment (OMT) improve outcomes in patients who develop postoperative ileus: A retrospective chart review** International Journal of Osteopathic Medicine Vol 12 (1) pages 32-37 <http://www.sciencedirect.com/science/article/pii/S1746068908000308>

"The OMT [osteopathic manipulative therapy] patients had a significantly shorter length of stay than the no treatment group (adjusted mean = 14.6 days for the non-treatment group versus 11.8 days for the treatment group) even after controlling for age differences"

Bramati-Castellarin I, Patel VB, Drysdale IP 2016 **Repeat-measures longitudinal study evaluating behavioural and gastrointestinal symptoms in children with autism before, during and after visceral osteopathic technique (VOT)** *Journal of Bodywork and Movement Therapies* Available online 14 January <http://www.sciencedirect.com/science/article/pii/S1360859216000024>

"This study investigated the influence of visceral osteopathic technique (VOT) on the behaviour and gastrointestinal (GI) symptoms of children with autism using a validated questionnaire to measure outcome."

"The 49 recruited autistic children suffered GI symptoms and impaired social interaction and communication, but were otherwise healthy. Thirty minute VOT sessions were applied to the abdomens of the children over a 6 week period whilst their GI and behavioural parameters were recorded. Outcomes were measured using a modified Autism Research Institute Secretin Outcomes Survey Form, the 'S.O.S Form'. Four questionnaires were completed by parents before treatment (control period), four completed during treatment (treatment period) and one completed six weeks after the last treatment (post treatment period). Subjects acted as their own controls."

"Results from repeat ANOVA demonstrated a positive, overall significant, symptomatic improvement ($p < 0.05$) in 'social behaviour and communication' and 'digestive signs' subscales of the questionnaire comparing before and after VOT. Significant improvement in vomiting ($p = 0.00029$), poor appetite ($p = 0.039$) and eye contact ($p = 0.035$) was also demonstrated after VOT application."

Brugman R, Fitzgerald K, Fryer G 2010 **The effect of Osteopathic Treatment on Chronic Constipation, A Pilot Study** *International Journal of Osteopathic Medicine* Vol 13 (1) pages 17-23 <http://www.sciencedirect.com/science/article/pii/S1746068909000923>

The study was a before-and-after study, with little or no external control.

"Following treatment there was a significant improvement in the severity of their constipation ($p < 0.01$), overall symptom improvement ($p < 0.01$), improved colonic transit times ($p < 0.01$) and overall quality of life ($p < 0.01$)."

"Participants reported an improvement in the overall severity of constipation, symptoms and quality of life."

Pizzolorusso G, Turi P, Barlafante G, Cerritelli F, Renzetti C, Cozzolino V, D'Orazio M, Fusilli P, Carcini F, D'Incecco C 2011 **Effect of osteopathic manipulative treatment on gastrointestinal function and length of stay of preterm infants: an exploratory study** *Chiropractic and Manual Therapies* 19:15 <https://www.ncbi.nlm.nih.gov/pubmed/21711535>

"Osteopaths performing OMT [osteopathic manipulative treatment] were trained to use only indirect and fluidic techniques which included: indirect myofascial, sutural spread, balanced membranous tension and balanced ligamentous tension (according to teachings of William Garner Sutherland, DO, and others)."

"The study suggests that osteopathic treatment may reduce a high occurrence of gastrointestinal symptoms and the rates of long-term stays."

Castellarina IB, Drysdale I, Patel V 2013 **Evaluation of behavioural and gastrointestinal symptoms in autistic children after visceral osteopathic treatment** *International Journal of Osteopathic Medicine* Volume 16, Issue 1, March, Pages e13–e14 <http://www.sciencedirect.com/science/article/pii/S1746068913000096>

"Autism or Autistic Spectrum Disorder (ASD) is a Pervasive Developmental Disorder (PDD) with

abnormal or impaired development in reciprocal social interaction, abnormal or impaired social communication and social imagination. Recent theories focused on the possibility of autism being linked with gastrointestinal (GI) abnormalities. Moreover, the problem behaviour typical of autism might be linked to the underlying medical symptoms such as abdominal pain, diarrhoea, and bloating typical of GI dysfunction."

"The study utilised VOT [visceral osteopathic technique] on 49 autistic children aged 3–8 yrs to investigate possible effects of the techniques. The children in the study were suffering from gastrointestinal symptoms and presented with impaired social relationship and communication, but were otherwise healthy. VOT was applied to the abdomen (duodenum, ileo-caecal valve, sigmoid and pancreas areas) and gastrointestinal and behavioural changes were measured after 6 osteopathic treatment sessions, once a week for six weeks. Each intervention session was for thirty minutes. The evaluation of the study was accessed via 8 questionnaires given to the parents who were asked to grade the child's response following the VOT intervention e.g. frequency of bowel movement, appetite eye contact and other parameters. "

"Statistical analysis indicated improvement in the gastrointestinal symptom of vomiting ($p = 0.00029$) and in the parameter of poor appetite ($p = 0.039$) after application of VOT. The subjects also had a significant improvement in eye contact ($p = 0.035$) one of the most characteristic social behavioural symptoms of autistic patients."

"The experimental hypothesis has been supported indicating a positive effect of VOT on the measured symptoms and behavioural patterns of Autistic children. This data indicates that the use of VOT on GI function may be of benefit to autistic children."

Tarsuslu T, Bol H, Şimşek IE, Toylan IE, Çam S, 2009 **The Effects of Osteopathic Treatment on Constipation in Children With Cerebral Palsy: A Pilot Study** Journal of Manipulative and Physiological Therapeutics Volume 32, Issue 8, October , Pages 648–653 <http://www.sciencedirect.com/science/article/pii/S0161475409002000>

Osteopathic manipulative treatment was included with both groups studied. (One group had other medical treatment). There was no control used in this study that did not include osteopathic treatment.

"This study included 13 children with cerebral palsy diagnosed as having chronic constipation by a gastroenterologist. The subjects were separated into 2 groups. Group 1 was treated with osteopathic methods and group 2 underwent both medical and exactly the same osteopathic treatments of group 1."

"Osteopathic treatments included fascial release, iliopsoas muscle release, sphincter release, and bowel mobilizations."

"The satisfaction of the subjects or the families with the treatments was not different when the groups were compared ($P > .05$). Constipation Assessment Scale scores decreased significantly in both groups ($P < .05$). Pretreatment (initial evaluation) and posttreatment (follow-ups at 3 and 6 months) results revealed no difference between the groups in either aspects ($P > .05$). However, both groups showed significant improvements compared with baseline evaluations ($P < .05$)."

"Osteopathic methods were as effective as osteopathic methods in addition to medical care for both treatment groups. The results of this study suggest that osteopathic methods may be helpful as an alternative treatment in constipation. "

Case series

Number of studies: 1

Gemelli M, Ulbricht L, Romaneli EFR 2014 **Evaluation of gastroesophageal reflux in infants treated with osteopathy using the I-GERQ-R questionnaire** IFMBE Proceedings 41, pp. 1067-1070 http://link.springer.com/chapter/10.1007/978-3-319-00846-2_264

"This is a retrospective pilot study of a database where four clinical files of individuals diagnosed with GERD [gastro esophageal reflux disease] in clinical treatment were analyzed. The data used for analysis were taken from questionnaire I-GERQ-R starting and ending at the osteopathic treatment. It was observed that in 28 ± 5.72 days scores fell from an average of 15.5 ± 4.45 to 0.50 ± 0.50 , determining reduction of all symptoms of reflux. A child presenting respiratory disorders has presented total relief of symptoms. Osteopathy has been effective to eliminate reflux symptoms"

Case reports

Number of studies: 2

Diniz LR, Nesi J, Curi AC, Martins W 2014 **Qualitative evaluation of osteopathic manipulative therapy in a patient with gastroesophageal reflux disease: a brief report.** J Am Osteopath Assoc Mar;114(3):180-8 <http://www.ncbi.nlm.nih.gov/pubmed/24567271>

"In this single-blinded prospective study, an OMTh [osteopathic manipulative therapy] protocol focusing on the diaphragm and esophagus was applied to a single patient, who had received a diagnosis of GERD [gastroesophageal reflux disease] 4 years previously. Outcomes were measured using the QS-GERD, which has a total possible score ranging from 0 to 45 (the lower the score, the better the quality of life) and a level of satisfaction from very satisfied to incapacitated. The OMTh protocol was applied at 3 sessions (initial session, second session 1 week after the first, and third session 2 weeks after the second), and the patient completed the QS-GERD 4 times (before the first session, before the third session, and 2 and 4 weeks after the third session)."

"The OMTh protocol was administered without adverse events, and the patient reported positive outcomes after the third session. The QS-GERD showed a score improvement from 13 of 45 to 4 of 45"

"The results in the present report show that OMTh applied to the diaphragm and esophagus may improve symptoms of GERD and should be added to the somatovisceral approach to the care of patients with this condition."

Leach J 2008 **Osteopathic support for a survivor of gastric cancer: A case report** International Journal of Osteopathic Medicine Volume 11, Issue 3, September, Pages 106–111 <http://www.sciencedirect.com/science/article/pii/S174606890800031X>

"An older male patient received eight consultations over a period of 10 months, some three years after his cancer diagnosis and treatment. Osteopathic management included manual treatment to improve musculoskeletal mobility, cranial osteopathic treatment to release tension in the deeper fascia, discussion of dietary strategies and advice and education about the origin of his symptoms due to a total gastrectomy and cancer chemotherapy. After treatment his physical symptoms were reduced. His neck pain was reduced. Nausea and discomfort after eating disappeared. Frequency of diarrhoea, breathlessness and fatigue were improved. He gained weight and resumed social activities. "

"Osteopathic consultations provide time to engage in complex problems that may benefit from a holistic approach. The touch and body work involved in osteopathy can help the patient come to terms with altered body image and to talk openly about anxieties. The Hay approach to diet appeared to be valuable in improving the quality of life for this particular patient after his gastrectomy."