

Guideline for Complementary Care
Evidence Table

REFERENCE #	CITATION	CONCLUSION(S)	CONSENSUS SCORE	EVIDENCE TYPE	POPULATION	INTERVENTIONS	COMPARISON	SAMPLE SIZE	OUTCOME MEASURE	RECOMMENDATION #
1	Pittman S, Kridli S. Music intervention and preoperative anxiety: an integrative review. <i>Int Nurs Rev.</i> 2011;58(2): 157-163.	There was inconsistent evidence regarding music's effectiveness in lowering blood pressure, heart rate and respirations in anxious patients. However, music intervention can still be used by nurses to create a calm, relaxing atmosphere geared towards reducing anxiety in preoperative patients.	IIB	Integrative review	Surgery patients	Music	N/A	11 studies	Anxiety levels	1
2	Fayazi S, Babashahi M, Rezaei M. The effect of inhalation aromatherapy on anxiety level of the patients in preoperative period. <i>Iranian Journal of Nursing and Midwifery Research.</i> 2011;16(4): 278-283.	Lavandula inhalation aromatherapy reduced anxiety levels.	IB	Randomized controlled trial	Adult heart and abdominal surgery patients	2 drops of lavadula oil rubbed on a hankerchief and inhaled by the patient for 20 minutes	Water rubbed into a hankerchief and inhaled by the patient for 20 minutes	72	Speilberger STAI inventory questions before and after th intervention	4
3	Binns-Turner PG, Wilson LL, Pryor ER, Boyd GL, Prickett CA. Perioperative music and its effects on anxiety, hemodynamics, and pain in women undergoing mastectomy. <i>AANA J.</i> 2011;79(4 Suppl):S21-7.	Additional research is needed to determine if music interventions would be helpful for other patient populations including children, men, and patients having other types of surgical procedures.	IIB	Quasi-experimental study design						1
4	Sadati L, Pazouki A, Mehdizadeh A, Shoar S, Tamannaie Z, Chaichian S. Effect of preoperative nursing visit on preoperative anxiety and postoperative complications in candidates for laparoscopic cholecystectomy: A randomized clinical trial. <i>Scand J Caring Sci.</i> 2013;27(4):994-998.	Preoperative nursing visits could decrease the level of pre-op anxiety & postoperative complications in this patient population	IB	Randomized controlled trial	Laparoscopic cholecystectomy surgery patients	Two pre-op interviews on the day before and just before entering the OR	Routine nursing care	100	Anxiety was evaluated with the STAI	Purpose
5	Pinto PR, McIntyre T, Nogueira-Silva C, Almeida A, Araujo-Soares V. Risk factors for persistent postsurgical pain in women undergoing hysterectomy due to benign causes: A prospective predictive study. <i>J Pain.</i> 2012;13(11):1045-1057.	Presurgical anxiety, emotional illness representations, and pain are risk factors for persistent postsurgical pain	IIIA	Prospective non-experimental study	Hysterectomy patients	N/A	N/A	186	Pain, surgical fear questionnaire, coping strategies questionnaire, illness perception	Purpose
7	Mitchell M. Patient anxiety and conscious surgery. <i>J PERIOPER PRACT.</i> 2009;19(6): 168-173.	The aim of the study was to uncover day of surgery to help explore and dispel misapprehensions and emphasize safe, controlled anaesthesia. In addition, the utilisation of a dedicated intraoperative nurse and development of a 'patient friendly' theatre environment must be pursued aspects which patients find anxiety provoking whilst undergoing uurgery with local/regional anaesthesia. Two areas were identified which gave rise to considerable anxiety for the majority of patients - anaesthetic information provision and intraoperative apprehension. Therefore, it can be confidently stated that anxiety prior to local/regional anaesthesia will be associated with a lack of accurate information (length of naesthesia, period of numbness) and misconceptions regarding intraoperative events (feeling, seeing, hearing surgery).	IIIB	Non-experiemtnal survey design	Adult surgery patients	N/A	N/A	N/A	N/A	Purpose
8	Nilsson U. The anxiety- and pain-reducing effects of music interventions: a systematic review. <i>AORN J.</i> 2008;87(4): 780-807.	Music intervention may be a useful method to reduce patients' experiences of unpleasant symptoms and discomfort. During perioperative care, soothing and relaxing music can be used as audioanalgesia, audioanxiolytic, or audio-relaxation as an integral part of the multimodal regimen administered to patients. Providing music to patients is an inexpensive techniquethat does not require extra staff members or expensive equipment. Music intervention can help maximize efforts to promote patient comfort and relaxation as well as reduce or control perioperative patient distress.	IA	Systematic review of RCTs	Elective surgery patients	Music	N/A	3936	Anxiety, pain, vital signs	1
9	Tam WW, Wong EL, Twinn SF. Effect of music on procedure time and sedation during colonoscopy: a meta-analysis. <i>World Journal of Gastroenterology.</i> 2008;14(34): 5336-5343.	Listening to music is effective in reducing procedure time and amount of sedation during colonoscopy and should be promoted.	IA	Meta-analysis	Colonoscopy patients	Music	No music	22/ 8 studi	Amount of sedation & length of time for the procedure	1
10	Arslan S, Özer N, Özyurt F. Effect of music on preoperative anxiety in men undergoing urogenital surgery. <i>Aust J Adv Nurs.</i> 2008;26(2): 46-54.	Findings support the use of music as an independent nursing intervention to manage preoperative anxiety in patients undergoing urogenital surgery. Listening to self-selected music during the preoperative period can effectively reduce anxiety levels and should be a useful tool for preoperative nursing.	IA	Randomized controlled trial	Male urology surgery patients	The experimental group listened to their choice of music for 30 minutes while they waited for surgery	Routine preoperatie care	64	Pre and post test anxiety was measured using the State Trait Anxiety Inventory (STAI) to assess anxiety before and after listening to the music preferred by the patient.	1
11	Lee KC, Chao YH, Yiin JJ, Chiang PY, Chao YF. Effectiveness of different music-playing devices for reducing preoperative anxiety: a clinical control study. <i>Int J Nurs Stud.</i> 2011;48(10): 1180-1187.	Both headphone and broadcast music are effective for reducing the preoperative patient's anxiety in the waiting room. Relevance to Clinical Practice: In order to take infection control into account, broadcast speakers can substitute for headphones for playing music to lower the anxiety level of patients waiting for surgery.	IB	Randomized controlled trial	Adult unmedicated surgery patinets waiting for surgery	Listening to instrumental music with eith headphones or broadcast speakers	Control group did not listen to music	167	The tools for measuring anxiety were visual analogue scale (VAS) ranging from "not anxious at all" to "extremely anxious" and heart rate variability (HRV).	1

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12	El-Hassan H, McKeown K, Muller AF. Clinical trial: music reduces anxiety levels in patients attending for endoscopy.. Aliment Pharmacol Ther. 2009;30(7): 718-724.	Patient's anxiety levels were significantly reduced by listening to music. Music is a simple strategy that can improve patient's well-being.	IA	Randomized controlled trial	Adult endoscopy patients	Self-selected music therapy for 15 minutes in the pre-op area	standard pre-op care	180	STAI-state anxiety scores before and after the interventions.	1
13	Dogan Meltem Vizeli, Senturan Leman. The effect of music therapy on the level of anxiety in the patients undergoing coronary angiography. OPEN J NURS. 2012;2(3): 165-169. doi:10.4236/ojn.2012.23025.	Listening to music during coronary angiography impacts intraoperative anxiety levels.	IB	Randomized controlled trial	Patients undergoing coronary angiography	Music intraoperatively	No music	200	State-trait anxiety inventory scores pre and post procedure	1
14	Bringman H, Giesecke K, Thorne A, Bringman S. Relaxing music as pre-medication before surgery: a randomised controlled trial.. Acta Anaesthesiol Scand. 2009;53(6): 759-764.	Relaxing music decreases the level of anxiety in a pre-op setting to a greater extent than orally administered midazolam. Higher effectiveness & absence of apparent adverse effects makes pre-op relaxing music a useful alternative to midazolam for premedication.	IA	Randomized controlled trial	Elective surgery patients	Relaxing music	Oral midazolam 0.05-0.1mg/kg	372	Anxiety measured with the STAI	1
15	Kulkarni S, Johnson PC, Kettles S, Kasthuri RS. Music during interventional radiological procedures, effect on sedation, pain and anxiety: a randomised controlled trial. Br J Radiol. 2012;85(1016):1059-1063.	Sedation requirements are significantly reduced by playing self-selected music to the patient during interventional radiology procedures. By lowering sedation during interventional radiology, music makes the procedure safer. It also contributes favourably to the overall patient experience.	IB	Randomized controlled trial	Patients for interventional radiology procedure	Listening to self-selected music via headphones	No music	100	Anxiety levels were assessed both before and after the procedure using the validated State Anxiety Inventory. Mean pulse rate and average of mean blood pressures were also recorded before and during the procedures as surrogate indicators of anxiety levels.	1
16	Johnson B, Raymond S, Goss J. Perioperative music or headsets to decrease anxiety.. Journal of PeriAnesthesia Nursing. 2012;27(3): 146-154.	Music is a relatively inexpensive intervention, easy to administer, noninvasive, and found to be a satisfier for most people. In addition, it offers patients a coping strategy giving them a sense of control over an unfamiliar environment and creating a positive patient outcome. Music can function as a distracter from the ambient noise of monitors, other patients, staff, and equipment that routinely occurs in the perioperative areas. The intentional use of music can be instrumental in transforming the environment of the surgical patient into a soothing and restful atmosphere to decrease anxiety and promote healing.	IA	Randomized controlled trial	Women undergoing gynecologic procedures.	Music with headphones; headphones only	Usual care	119	Patient anxiety measured with the Rapid Assessment Anxiety tool	1
17	Jimenez-Jimenez M, Garcia-Escalona A, Martin-Lopez A, De Vera-Vera R, De Haro J. Intraoperative stress and anxiety reduction with music therapy: a controlled randomized clinical trial of efficacy and safety.. Journal of Vascular Nursing. 2013;31(3): 101-1	The Music Therapy intervention was easily implemented in the context of nursing care received during varicose vein surgery and was positively accepted and valued by the majority of the patients. MT is a safe procedure that is proved to reduce anxiety and stress in the study patients.	IA	Prospective randomized controlled trial	Patients for cross-section of the great saphenous vein.	Music Therapy passive intervention that consisted of audition of musical fragments during varicose veins surgery. These pieces previously showed relaxing actions on the cardiovascular system.	Intraoperative routine attention	40	The anxiety levels were measured by means of pre- and postsurgical questionnaires by a blinded investigator for the study arm to which the patients had been randomized. Heart rate and systolic and diastolic blood pressures were determined during the intervention, and adrenaline and noradrenaline plasma levels were determined before and after the surgical procedure.	1
18	Hook L, Sonwathana P, Petpichetchian W. Music therapy with female surgical patients: effect on anxiety and pain. THAI J NURS RES. 2008;12(4): 259-271.	The findings suggest the use of music, as a complementary empirically-based nursing intervention, for reducing pre-operative anxiety, post-operative pain sensation and post-operative pain distress among female adult surgical patients.	IA	Randomized controlled trial	Female surgical patients	The music therapy group listened to self-selected music twice daily the day before surgery and for 3 days post-operative.	Standard care	102	Visual Analogue Scales were used to measure anxiety before and after the music intervention, as well as pain sensation and pain distress during the post-operative period. State-trait anxiety, during the pre- and post-operative periods, also was measured.	1

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19	Nilsson U, Lindell L, Eriksson A, Kellerth T. The effect of music intervention in relation to gender during coronary angiographic procedures: a randomized clinical trial.. European Journal of Cardiovascular Nursing. 2009;8(3): 200-206.	Music interventions are highly feasible but were not effective in this study, did not disturb the exam, and patients and staff looked at it favorably.	IB	Randomized controlled trial	Angiography procedure patients	Listening to relaxing music	No music	240	Puncture pain and discomfort, angina, anxiety, and needed medications for anxiety & pain.	1
20	Ottaviani S, Bernard JL, Bardin T, Richette P. Effect of music on anxiety and pain during joint lavage for knee osteoarthritis. Clin Rheumatol. 2012;31(3): 531-534.	Music is a simple & effective tool to alleviate pain & anxiety.	IB	Randomized controlled trial	Joint lavage patients	Listening to music	No music	62	Anxiety & pain measured with the VAS and vital signs	1
21	Yeo JK, Cho DY, Oh MM, Park SS, Park MG. Listening to music during cystoscopy decreases anxiety, pain, and dissatisfaction in patients: a pilot randomized controlled trial.. Journal of Endourology. 2013;27(4): 459-462.	Listening to music during a urology procedure significantly reduces feelings of pain, discomfort, & dissatisfaction. Music is a simple, inexpensive, & effective adjunct to sedation during cystoscopy.	I C	Randomized controlled trial	Male cystoscopy patients	Listening to classical music during the procedure	No music	70	Anxiety levels using the the STAI; Self-assessment of satisfaction, discomfort, & willingness to repeat the type of procedure using the VAS.	1
22	Wu J, Chaplin W, Amico J, et al. Music for surgical abortion care study: A randomized controlled pilot study. Contraception. 2012;85(5):496-502.	Music as an adjunct to local anesthesia during surgical gyn procedures is associated with a trend toward less anxiety postprocedure and better coping while maintaining high patient satisfaction. Music does not appear to affect pain.	IC	Randomized controlled trial pilot study	Female surgical patients	Music and local anesthesia	Local anesthesia	26	Assessment of pain, anxiety, and coping with an 11 point verbal numerical scale	1
23	Bradt J, Dileo C, Shim M. Music interventions for preoperative anxiety.. Cochrane Database of Systematic Reviews. 2013;6: 006908.	Music therapy may have a beneficial effect on pre-op anxiety. Music interventions may provide an alternative to sedatives and anxiolytics for reducing pre-op anxiety.	IIA	Cochrane review of RCTs and quasi-experimental studies	In-patient surgical patients	Music therapy pre-operatively	Standard pre-op care	2051	Pre-op anxiety, heart rate, systolic BP, diastolic BP, and respiratory rate	1
24	Sadideen H, Parikh A, Dobbs T, Pay A, Critchley PS. Is there a role for music in reducing anxiety in plastic surgery minor operations?.. Ann R Coll Surg Engl. 2012;94(3): 152-154.	In the era of the patient centred approach to clinical care, it is crucial to minimise patient anxiety. Music appears to reduce intra-operative anxiety in awake patients in both the elective and trauma plastic surgical setting. Easy listening music and chart classics appear to be suitable genres according to patients. We believe there is a role for a large, multicentre, randomised control study to examine the benefits of music in all local anaesthetic procedures across different specialties.	IIB	Quasi-experimental study	Surgical patients receiving a local anesthetic	Music played in the OR	No music	96	Subjectively anxiety was evaluated by the patient with a visual analogue scale (VAS) and objectively by the respiratory rate (RR), both pre and post-operatively.	1
25	McLeod Roddy. Evaluating the effect of music on patient anxiety during minor plastic surgery. J PERIOPER PRACT. 2012;22(1): 14-18.	Although the researcher did not find statistically significant differences in the selected outcome measures, the intervention seemed to be enjoyed by the patients in the experimental group. Minimising anxiety prior to and during a minor operation may help promote relaxation and enhance patient comfort.	IIC	Quasi-experimental quantitative study design	Adult minor surgery patients	Listening to self-selected music	Standard care	80	Anxiety scores measured with the STAI	1
26	Lee KC, Chao YH, Yiin JJ, Hsieh HY, Dai WJ, Chao YF. Evidence that music listening reduces preoperative patients' anxiety.. Biol Res Nurs. 2012;14(1): 78-84.	Listening to music can significantly lower the anxiety levels of patients before surgery. The frequency-domain parameters of HRV (heart rate variability) can be indicators for monitoring the change in anxiety level of preoperative patients.	IB	Randomized controlled trial	Presurgical adult patients who were unmedicated for hypertension, heart disease, no caffeine, sedatives, or pre-op medications	The intervention consisted of a 10-min period of exposure to relaxing music delivered through headphones.	No music	140	The intervention consisted of a 10-min period of exposure to relaxing music delivered through headphones.	1
27	Moris DN, Linos D. Music meets surgery: two sides to the art of "healing". Surg Endosc. 2013;27(3): 719-723.	Music in the operating room can have beneficial effects on patients by decreasing stress, anxiety, and the demand for analgesic and anesthetic drugs. For the surgical staff, music is considered to be distracting. For the surgeon, music can increase the speed and accuracy of task performance.	VA	Literature review	Surgery patients	N/A	N/A	N/A	N/A	1

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28	Beccaloni AM. The medicine of music: a systematic approach for adoption into perianesthesia practice. <i>Journal of PeriAnesthesia Nursing</i> . 2011;26(5): 323-330.	Additional research is needed with larger sample sizes to confirm the positive effect of music.	VB	Literature review	N/A	N/A	N/A	N/A	N/A	1
29	Wakim JH, Smith S, Guinn C. The efficacy of music therapy. <i>Journal of PeriAnesthesia Nursing</i> . 2010;25(4): 226-232.	Listening to music was beneficial to the patient no matter the setting. Offering a music selection to patients before anesthesia could enhance its positive effect. Perianesthesia nurses could easily develop a protocol for different situations where patients will be exposed to interventions where the use of general or local anesthesia is expected.	VC	Literature review	Surgery patients	Music	N/A	N/A	Anxiety	1
30	Selimen Deniz, Andsoy Isil Isik. The importance of a holistic approach during the perioperative period. <i>AORN J</i> . 2011;93(4): 482-490. doi:10.1016/j.aorn.2010.09.029.	By providing holistic care, the perioperative nurse can help the surgical patient cope more easily with surgical trauma, have less pain, use less analgesia, and experience fewer complications. This approach helps the patient to be discharged from the health care facility more quickly and increases his or her satisfaction with health care. Successful surgery for the patient not only means recovering health, but also regaining physical, mental, and spiritual health as a whole.	VB	Literature review	Surgical patients	Holistic measures	N/A	N/A	N/A	1
31	Gooding L, Swezey S, Zwischenberger JB. Using music interventions in perioperative care. <i>South Med J</i> . 2012;105(9): 486-490.	The data suggest that researcher selected music is most effective in reducing anxiety, primarily because it incorporates evidence-based parameters such as consistent tempo and dynamics, stable rhythms, and smooth melodic lines. Finally, the literature suggests that music therapists can serve as experts to help medical personnel identify effective implementation strategies.	VB	Literature review	N/A	Music	N/A	N/A	N/A	1
32	Kim YK, Kim SM, Myoung H. Musical intervention reduces patients' anxiety in surgical extraction of an impacted mandibular third molar. <i>Journal of Oral & Maxillofacial Surgery</i> . 2011;69(4): 1036-1045.	These results support the hypothesis that the use of patient-chosen music during surgical extraction of an IMTM significantly lowers patient intraoperative anxiety levels.	IB	Randomized controlled trial	Patients for impacted 3rd molar surgery	Upon the patient's arrival at the operating room, the patient selected songs were played continuously and randomly throughout the operation. During the operation, the patient was able to control the volume of the music using a remote control.	Non-music treatment	219	Perioperative anxiety and perceptions of pain were assessed using the Dental Anxiety Scale and the Visual Analog Scale, respectively.	1
33	Matsota P, Christodouloupoulou T, Smyrnioti ME, et al. Music's use for anesthesia and analgesia. <i>Journal of Alternative & Complementary Medicine</i> . 2013;19(4): 298-307.	Complementary method to reduce perioperative stress and anxiety.	VA	Literature review	N/A	N/A	N/A	N/A	N/A	1
34	Weeks BP, Nilsson U. Music interventions in patients during coronary angiographic procedures: a randomized controlled study of the effect on patients' anxiety and well-being. <i>European Journal of Cardiovascular Nursing</i> . 2011;10(2): 88-93.	Specially designed music reduced anxiety & increased well-being in patients during coronary angiographic procedures. Patient focused music seemed to be preferable.	IC	Randomized controlled trial	Elective coronary angiogram &/or percutaneous coronary intervention patients	Patient focused music group via an audio pillow; loudspeaker music group	No music	98	Numeric rating scale for anxiety, well-being & sound environment.	1

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35	Ni CH, Tsai WH, Lee LM, Kao CC, Chen YC. Minimising preoperative anxiety with music for day surgery patients—a randomised clinical trial. <i>J Clin Nurs</i> .2012;21(5):620-625.	Patients undergoing day surgery may benefit significantly from musical intervention to reduce preoperative anxiety and improve physiological parameters.	IA	Randomized controlled trial	Outpatient surgery patients	Music delivered via headphones	No music	183	Anxiety, measured by the State-Trait Anxiety Inventory, and vital signs were measured before and after the experimental protocol.	1
36	Hoya Y, Matsumura I, Fujita T, Yanaga K. The use of nonpharmacological interventions to reduce anxiety in patients undergoing gastroscopy in a setting with an optimal soothing environment.. <i>Gastroenterology Nursing</i> . 2008;31(6): 395-399.	Providing an OSE before and during gastroscopy is useful to minimize patient anxiety regarding experiencing a gastroscopy. This nonpharmacological method is a simple, inexpensive, and safe method of minimizing anxiety before and during gastroscopy.	IC	Randomized controlled trial	Outpatient gastroscopy patients	The tools for an OSE, including a safe essential oil burner with lavender essential oil and a digital video disk program entitled “Flow” manufactured by NHK (Japan Broadcasting Corporation) software, were provided to patients in the waiting room before gastroscopy.	Standard care	50	Face scale scores	4
37	Bradt J, Dileo C, Grocke D. Music interventions for mechanically ventilated patients. <i>Cochrane Database Syst Rev</i> . 2010;(12):CD006902.	Music listening may have a beneficial effect on heart rate, respiratory rate, and anxiety in mechanically ventilated patients. However, the quality of the evidence is not strong. Most studies examined the effects of listening to pre-recorded music. More research is needed on the effects of music offered by a trained music therapist.	IIA	Cochrane review of RCTs and quasi-experimental studies	Mechanically ventiated patients	Music	No music	213/ 8 trials	Decreased anxiety	1
38	Bradt J, Dileo C, Grocke D, Magill L. Music interventions for improving psychological and physical outcomes in cancer patients. <i>Cochrane Database Syst Rev</i> .2011;(8):CD006911.	This systematic review indicates that music interventions may have beneficial effects on anxiety, pain, mood, and QoL in people with cancer. Furthermore, music may have a small effect on heart rate, respiratory rate, and blood pressure. Most trials were at high risk of bias and, therefore, these results need to be interpreted with caution.	IIA	Cochrane review of RCTs and quasi-experimental studies	Cancer patients	Music	No music	391/ 30 trials	Anxiety reduction	1
39	Bradt J, Dileo C, Potvin N. Music for stress and anxiety reduction in coronary heart disease patients. <i>Cochrane Database Syst Rev</i> . 2013;12:CD006577.	This systematic review indicates that listening to music may have a beneficial effect on anxiety in persons with CHD, especially those with a myocardial infarction. Anxiety-reducing effects appear to be greatest when people are given a choice of which music to listen to. Furthermore, listening to music may have a beneficial effect on systolic blood pressure, heart rate, respiratory rate, quality of sleep and pain in persons with CHD. However, the clinical significance of these findings is unclear. Since many of the studies are at high risk of bias, these findings need to be interpreted with caution. More research is needed into the effects of music interventions offered by a trained music therapist.	IIA	Cochrane review of RCTs and quasi-experimental studies	Coronary heart disease patients	Music	No music	369/ 26 trials	Anxiety reduction	1
40	Zhang ZS, Wang XL, Xu CL, et al. Music reduces panic: An initial study of listening to preferred music improves male patient discomfort and anxiety during flexible cystoscopy. <i>J Endourol</i> . 2014;28(6):739-744.	Listening to preferred music during a urology procedure is an easy way to improve male patients' discomfort and reduce anxiety.	IA	Randomized controlled trial	Male cystoscopy patients	Selection & listening to preferred music during the procedure	No music	124	Pain score using VAS and anxiety scores using the STAI, and pulse rate	1
41	Wentworth LJ, Briese LJ, Timimi FK, et al. Massage therapy reduces tension, anxiety, and pain in patients awaiting invasive cardiovascular procedures.. <i>Prog Cardiovasc Nurs</i> . 2009;24(4): 155-161.	This pilot study showed that massage can be incorporated into medical cardiovascular units' preprocedural practice and adds validity to prior massage studies.	IB	Randomized controlled trial	Preprocedure cardiovascular patients	20 minutes of massage before the procedure	Standard preprocedural care	130	VAS scores measuring pain, anxiety, and tension before and after the procedure	2
42	Brand LR, Munroe DJ, Gavin J. The effect of hand massage on preoperative anxiety in ambulatory surgery patients. <i>AORN J</i> . 2013;97(6):708-717.	Preoperative hand massage lowered anxiety levels and is an important patient satisfaction indicator.	IIB	Quasi-experimental study	Adult pre-op patients at ASC of a rural community hospital	Hand massage	No intervention	86	The use of hand massage to reduce the anxiety of pre-op OP surgery patients	2
43	Rosen J, Lawrence R, Bouchard M, Doros G, Gardiner P, Saper R. Massage for perioperative pain and anxiety in placement of vascular access devices.. <i>Adv Mind Body</i> . 2013;27(1): 12-23.	Both massage therapy & structured attention proved beneficial for alleviating pre-op anxiety in cancer patients undergoing port placement.	IB	Randomized controlled trial	Cancer patients undergoing port placement	Usual care with massage therapy	Usual care with structured attention	60	Pain level using an 11 point numerical rating scale & situational anxiety using the STAI	2
44	Acar HV, Cuvas O, Ceyhan A, Dikmen B. Acupuncture on Yintang point decreases preoperative anxiety.. <i>Journal of Alternative & Complementary Medicine</i> . 2013;19(5): 420-424.	Acupuncture with ear-press needles on the <i>Yintang</i> point reduces preoperative anxiety in adult surgical patients. This method offers an alternative to medications in the management of preoperative anxiety.	IA	Prospective, randomized, single-blind controlled study	Adult surgical patients	Single, 20 minute session of single-point acupuncture applies on <i>Yintang</i>	Single, 20 minute session of single-point acupuncture applies on a sham point	52	Changes in the bispectral index (BIS) & State-Trait Anxiety Index (STAI)	3
45	Valiee S, Bassampour SS, Nasrabadi AN, Pouresmaeil Z, Mehran A. Effect of acupressure on preoperative anxiety: a clinical trial.. <i>Journal of PeriAnesthesia Nursing</i> . 2012;27(4): 259-266.	Overall, findings revealed that acupressure at true points (third eye and Shen men) can reduce higher preoperative anxiety of patients before abdominal surgery and that it has had a more clinically beneficial effect than sham points.	IB	Randomized controlled trial	Preoperative patients	Acupressure at the true points	Acupressure at sham or false points	70	3 part questionnaire with a VAS to measure anxiety	3

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46	Wu S, Liang J, Zhu X, Liu X, Miao D. Comparing the treatment effectiveness of body acupuncture and auricular acupuncture in preoperative anxiety treatment. Journal of Research in Medical Sciences. 2011;16(1): 39-42.	Both auricular and body acupuncture treatment methods were effective in decreasing anxiety in preoperative patients.	IC	Randomized controlled trial	Elective ambulatory surgery patients	Body acupuncture group who received acupuncture in the special points of the body	Auricular acupuncture group who received ear acupuncture	35	Zung Self-rating anxiety scale before & after the study.	3
47	Liudden I, Norheim AJ. Acupuncture and related techniques in ambulatory anesthesia. Curr Opin Anaesthesiol. 2013;26(6):661-668.	Pharmacological drug treatment may be only partially effective and produce an adverse event. Research suggests that acustimulation may alleviate postoperative morbidities, although the body of evidence of the effect is equivocal. The treatments are easy to perform, and adverse events and costs are minimal. It may be profitable to implement this beneficial treatment to ambulatory patients.	VB	Literature review	Surgical patients	N/A	N/A	N/A	N/A	3
48	Braden R, Reichow S, Halm MA. The use of the essential oil lavender to reduce preoperative anxiety in surgical patients. Journal of PeriAnesthesia Nursing. 2009;24(6): 348-355.	Lavandin was associated with lower anxiety when the patient left the pre-op area for the OR. It is a simple, low-risk, and cost-effective intervention to reduce anxiety.	IA	Randomized controlled trial	Adult surgical patients	Essential oil lavender plus standard preoperative care	Standard pre-op care & standard pre-op care plus jojoba oil	150	Lower anxiety measured by the visual analog scale (VAS)	4
49	Hu PH, Peng YC, Lin YT, Chang CS, Ou MC. Aromatherapy for reducing colonoscopy related procedural anxiety and physiological parameters: a randomized controlled study. Hepatogastroenterology. 2010;57(102-103):1082-1086.	Aromatic care for colonoscopy had no significant effect on procedural anxiety. It is an effective and safe preprocedural technique that could decrease systolic blood pressure.	IC	Randomized controlled trial	Colonoscopy patients	Aromatherapy with Neroli oil	Inhalation of sunflower oil	27	Anxiety measured with STAI-s and pain measured by VAS	4
50	Marc I, Rainville P, Masse B, et al. Women's views regarding hypnosis for the control of surgical pain in the context of a randomized clinical trial. Journal of Women's Health. 2009;18(9): 1441-1447.	Women in the hypnosis group generally reported higher levels of satisfaction with various aspects of the procedure. This is consistent with the growing literature in favor of hypnotic interventions to improve pain management and care.	IB	Randomized controlled trial	Outpatient Gynecology surgery patients	short, standardized hypno-analgesia intervention before and during the procedure.	Standard care	350	Individual use of the various hypnotic strategies proposed during the intervention and their views (likes=dislikes) about the hypnotic intervention, the surgical experience, and their participation in this randomized study.	5
51	Lang EV, Berbaum KS, Pauker SG, et al. Beneficial effects of hypnosis and adverse effects of empathic attention during percutaneous tumor treatment: when being nice does not suffice. Journal of Vascular & Interventional Radiology. 2008;19(6): 897-905.	Procedural hypnosis including empathic attention reduces pain, anxiety, and medication use. Conversely, empathic approaches without hypnosis that provide an external focus of attention and do not enhance patients' self-coping can result in more adverse events. These findings should have major implications in the education of procedural personnel.	IA	Randomized controlled trial	Patients having tumor embolization or radiofrequency ablation	Empathic attention with defined behaviors displayed by an additional provider, or self-hypnotic relaxation including the defined empathic attention behaviors	Standard care	201	Main outcome measures were pain and anxiety assessed every 15 minutes by patient self-report, medication use (with 50 g fentanyl or 1 mg midazolam counted as one unit), and adverse events, defined as occurrences requiring extra medical attention, including systolic blood pressure fluctuations (>50 mm Hg change to >180 mm Hg or <105 mm Hg), vasovagal episodes, cardiac events, and respiratory impairment.	5
52	Abdeshahi SK, Hashemipour MA, Mesgarzadeh V, Shahidi Payam A, Halaj Monfared A. Effect of hypnosis on induction of local anaesthesia, pain perception, control of haemorrhage and anxiety during extraction of third molars: A case-control study. J Craniomaxillofac Surg. 2013;41(4):310-315.	Hypnosis might be used as an adjunct method in dental procedures for anxious patients	IIB	Quasi-experimental study- Case-control study	Patients for 3rd molar extraction	Hypnosis with either fixing the gaze on one point or Chiasson's technique	Patients had one side under hypnosis and the opposite under local anesthesia	24	Pain, hemorrhage	5
53	Flory N, Martinez Salazar GM, Lang EV. Hypnosis for acute distress management during medical procedures. INT J CLIN EXP HYPNOSIS. 2007;55(3): 303-317. []	There are many challenges and possibilities to using hypnotic techniques to manage acute distress during medical procedures.	VB	Literature review	NA	Hypnosis	NA	NA	NA	5
54	Schnur JB, Bovbjerg DH, David D, et al. Hypnosis decreases presurgical distress in excisional breast biopsy patients. Anesthesia & Analgesia. 2008;106(2): 440-444.	The study results indicate that a brief presurgery hypnosis intervention can be an effective means of controlling presurgical distress in women awaiting diagnostic breast cancer surgery.	IB	Randomized controlled trial	Breast cancer surgery patients	15-minute presurgery hypnosis session. The hypnosis session involved suggestions for increased relaxation and decreased distress.	15-minute presurgery attention control session. The attention control session involved nondirective empathic listening	90	Presurgery distress was measured using visual analog scales (VAS) and the short version of the Profile of Mood States (SV-POMS).	5

Guideline for Complementary Care
Evidence Table

REFERENCE #	CITATION	CONCLUSION(S)	CONSENSUS SCORE	EVIDENCE TYPE	POPULATION	INTERVENTIONS	COMPARISON	SAMPLE SIZE	OUTCOME MEASURE	RECOMMENDATION #
55	Hulse RS, Stuart-Shor EM, Russo J. Endoscopic procedure with a modified Reiki intervention: a pilot study.. Gastroenterology Nursing. 2010;33(1): 20-26.	There were no between-group differences on intraprocedure medication use or postprocedure physiologic measures. Although the experimental group patients had more symptoms, they did not require additional pain medication during the procedure, suggesting that (1) anxious people may benefit from an adjunctive therapy; (2) anxiety and pain are decreased by Reiki therapy for patients undergoing colonoscopy, and (3) additional intraprocedure pain medication may not be needed for colonoscopy patients receiving Reiki therapy. This pilot study provided important insights in preparation for a rigorous, randomized, controlled clinical trial.	IC	Prospective, non-blinded, partially randomized patient preference design	First time colonoscopy patients	the use of Reiki prior to colonoscopy to reduce anxiety and minimize intraprocedure medications	Stansard care	21	Pain, anxiety, & physiological measures	6
56	Bourque Alda L, Sullivan Mary E, Winter Michael R. Reiki as a pain management adjunct in screening colonoscopy. Gastroenterol Nurs. 2012;35(5): 308-312.	Reiki has the potential to decrease the amount of sedating medications and may assist with pain management.	IIC	Pilot study/quasi-experimental	Patients between the ages of 50-60 undergoing screening colonoscopy	Reiki	Patients who had a screening colonoscopy prior to the study period & a placebo Reiki group	60	Amount of meperidine and midazolam use	6
57	Gonzales EA, Ledesma RJ, McAllister DJ, Perry SM, Dyer CA, Maye JP. Effects of guided imagery on postoperative outcomes in patients undergoing same-day surgical procedures: a randomized, single-blind study. AANA J. 2010;78(3):181-188.	The use of guided imagery in the ambulatory surgery setting can significantly reduce preoperative anxiety, which can result in less postoperative pain and earlier PACU discharge times.	IB	Randomized controlled trial	Adult patients for head and neck surgery	Listening to a guided imagery CD for 28 minutes and privacy	Privacy for 28 minutes and no intervention	44	VAS pain scores and APAIS preoperative anxiety scores measured preoperatively, 1, and 2 hours postoperatively.	7
58	Ko YL, Lin PC. The effect of using a relaxation tape on pulse, respiration, blood pressure and anxiety levels of surgical patients.. J Clin Nurs. 2012;21(5-6): 689-697.	The results show that a relaxation tape can significantly reduce the level of anxiety and vital signs related to anxiety in surgical patients. The results of this study can provide an empirical basis for nursing treatments. We recommend that relaxation tapes be included in standard of care to alleviate anxiety in surgical patients.	IIIB	One-group pretest-post-test quasi-experimental design.	Surgical patients	Relaxation tape, deep breathing, and guided imagery	N/A	80	STAI to measure anxiety and respiration, pulse and blood pressure were used to collect data measurements on the anxiety level of these patients.	7
59	Akhlaghi M, Shabani G, Rafieian-Kopaei M, Parvin N, Saadat M, Akhlaghi M. Citrus aurantium blossom and preoperative anxiety.. Rev Bras Anesthesiol. 2011;61(6): 702-712.	Citrus aurantium blossom may be effective in terms of reduction in preoperative anxiety before minor operation.	IA	Randomized controlled trial	Minor surgery patients	Oral premedication 2 hours before surgery with Citrus aurantium Blossom	Control group received placebo of saline solution	60	Anxiety was measured before and after premedication using the Spielberger state-trait anxiety inventory (STAI-state) and the Amsterdam preoperative anxiety and information scale (APAIS) before operation.	7