Patient and Provider Optimization

Robert G. McNeill, DDS, MD
Diplomate, American Board of Oral & Maxillofacial Surgery
Fellowship, Integrative Medicine
Who am I?

• Grew up in Canada
• Oral and maxillofacial surgeon with offices in Preston Center and North Garland
• Fellowship trained in Integrative Medicine from the University of Arizona School of Medicine
Conflicts of interest

- Consultant and speaker for Neodent dental implant system
- More in-depth discussion April 13th
Disclaimer

• I want you to think outside the box to manage yourself, your family and your patients’ lives better
• I might leave you with more questions than answers
• I don’t have it all figured out
• I used to think some of this stuff was crazy
What is our game plan?

• Discuss things :
  • you know
  • you don’t know
  • some things you want to hear
  • some things you don’t want to hear
  • some things you won’t really believe
Why did I go on this adventure?

• Selfishly I wanted to improve my life
• Live longer in a healthy way
• Be happier/more peaceful
• Improve the experience for my patients
• Increase patient safety
Optimization

• The action of making the best or most effective use of a situation or resource
• Moving towards your full potential
Issues that may relate to us:

- Physical disability
- Burnout
- Depression and anxiety
- Drug addiction
- Alcohol addiction
- Suicide risk
- Financial pressures
- Staff/corporate pressures

- Financial freedom
- Independence
- Balanced life
- Create your practice environment
- Serving others
- Security
- Flexible schedule/family time
Do we get off to a bad start?

- Burnout, depression and suicidal ideation in dental and dental hygiene students.
  - European Journal of Dental Education. 2017. February 27.

  - 40% dental students met criteria for burnout
  - 38% hygiene students met criteria for burnout
  - 9% moderate depression
  - 6% dental, 9% hygiene had suicidal ideation
Where are you right now?
Don’t let your patient die
BRP data for Texas 2011-2015

• Six major sedation events (death/permanent disability)
  • Child under 8 or adults with high risk factors
  • A deeper level of sedation than intended occurred in many cases
• Poor pre-op evaluation, drug over dosage, poor monitoring and poor emergency management
Anesthesia mishaps in the State of Texas 2011-2015

• 13 mishaps with 8 involving children under 8 or high risk adults (obese, compromised health or elderly)
  • Poor pre-operative evaluation
  • Drug overdose
  • Premature discharge
  • Bolus drug administration
  • Not using required monitors
  • Poor problem recognition
  • Poor emergency management
Emergency Failures from BRP Report

• Emergency drugs given at the wrong dose
• Ventilation equipment was available but used ineffectively
• Ventilation equipment was not available
• Supplemental oxygen was available but not administered when indicated
• The provider was slow to activate EMS!!! (most common finding)
What can you do?

- Have an emergency plan and use it for emergency drills with your staff
- Activate 911 early
- Practice using ventilation equipment
- Careful sedation usage

Written Emergency Plan

When Emergency Situation Begins:

Extra Assistant needs to get Dr. McNeill and notify him of situation if he is not present. He will decide if 9-1-1 will need to be called.

☐ All available assistants need to be present
☐ All of front office needs to head to back of office to call 9-1-1 when needed, door to waiting room needs to be locked, and direct EMS into office
☐ Emergency kit needs to be in room (Airway/AED/Oxygen/Suction)
☐ IV Access if not started
☐ Ask Dr. again if 9-1-1 needs to be called if not called earlier
☐ One assistant needs to record events, medication dosage and time, and AED shocks and time administered
☐ Ask Dr. about reversal:
  - Flumazenil: 0.2 mg 2-3c [reverses Versed]
  - Naloxone: 0.2-0.4 mg [reverses Fentanyl]
☐ Ask Dr. again if 9-11 needs to be called if not called earlier
☐ If EMS is called front office needs to make copy of recorded events when they arrive and give to EMS.

North Texas Dental Implants
Oral & Facial Surgery
4880 President George Bush Turnpike, Suite 101
Garland, TX 75040
Or
8411 Preston Road, Suite 850
Dallas, TX 75225
Limit medications

• Avoid local anesthesia over dosage
• Be careful with 4% solutions
• Is it really a failure of local anesthesia?
• Limit epinephrine when appropriate to 0.04 mg (4 carps of 1:200k versus 2 carps 1:100k)
Failure

• It is okay to have your sedation technique fail
• It is okay to say NO to a procedure or abort a procedure
• We do not need to do everything
  • It is likely not the best thing for you or the patient
  • Should the patient be managed in a different environment?
Do no harm!

- How often did the drugs I Rx get used recreationally?
- Did any of the drugs I Rx help lead to someone’s opioid addiction?
• In 2010 enough narcotics were Rx to medicate every American every 4h for one month
• We are part of the problem
• Every additional day increases risk
Limit opioids!

Risks versus benefits!
• NSAIDs
  • Ibuprofen 400-600mg q6-8hrs (max. 3.2g/day)
  • Naproxen 500mg q12hr or 500mg initially followed by 250mg q6-8hr (max. 1000-1500mg/day)
• Acetaminophen
  • 325-650mg q4-6hr
  • (max. 4g/day)

• NSAIDs
  • GI, ulcers
  • Blood thinners
  • Renal disease
• Acetaminophen
  • Liver disease
  • Severe renal impairment

• Alternate the two to decrease overall dosages
Are NSAIDs safe to use in cardiac disease?

- Recent studies show that Naproxen (Aleve) seems to be less harmful than other NSAIDs
- Risk is low but statistically significant
  - Trelle, S. et al, BMJ. 2001;342
- Limit use
- Add acetaminophen to the mix
- Try to have patients take NSAIDs prior to the procedure that will cause inflammation
Optimizing patient safety:

- Rx fewer pills for narcotics
- Use NSAIDs first
- Use acetaminophen second
- Use mild narcotic as the backup
- Have them hold Rx at pharmacy

- Anxiety increases pain perception
- Distraction can be helpful
- Word selection matters
Be careful with antibiotics!

• Use only when necessary and for a limited time
• Antibiotics can harm
  • Anaphylaxis
  • PCN renal disease
  • C. diff
  • Change the gut microbiome
  • Weight gain
  • Consider probiotics
How can we optimize the patient experience?

• Let’s consider all therapies both conventional and complementary and alternative (integrative medicine)

• Look at options that have lower risks with greater benefit
Why Hospitals Should Treat Adult Patients Like Children

Reducing stress for adult inpatients may improve health and reduce readmissions

BY LISA WARD

A STAY IN THE hospital isn’t always good for your health. Bright lights, loud noises, sleep deprivation, frequent blood draws and other painful procedures are among the stressors that can take a toll on patients—and might even make them more vulnerable to other health threats once they are discharged, researchers theorize.

But a recent article published by the American Journal of Nursing suggests that hospitals need to take steps to reduce stress for adult inpatients. The article, titled “Reducing Stress for Adult Inpatients,” was written by Lisa Ward and published in the August issue of the journal.

Reducing stress for adult inpatients is important for several reasons. First, it can help to improve the overall health of patients. Studies have shown that stress can have a negative impact on physical health, including increasing the risk of heart disease and other chronic conditions. By reducing stress, hospitals can help to promote better health outcomes for their patients.

Second, reducing stress for adult inpatients can help to improve the quality of care that patients receive. When patients are feeling stressed, they may have difficulty following instructions or understanding their care plans. This can lead to errors in treatment and can make it more difficult for patients to recover from their illnesses.

Finally, reducing stress for adult inpatients is important for the mental health of patients. When patients are feeling stressed, they may have difficulty sleeping, eating, and engaging in other daily activities. By reducing stress, hospitals can help to promote better mental health for their patients.

To reduce stress for adult inpatients, hospitals should consider implementing a variety of strategies. These might include providing patients with privacy and comfort, reducing the noise and light levels in the hospital, and providing patients with opportunities to engage in physical activity. In addition, hospitals might consider offering patients access to mental health services, such as counseling or support groups.

In conclusion, reducing stress for adult inpatients is an important goal for hospitals. By implementing strategies to reduce stress, hospitals can help to promote better health outcomes, improve the quality of care, and promote better mental health for their patients.

Dr. Lisa Ward

For more information about reducing stress for adult inpatients, please contact the American Journal of Nursing at (555) 555-5555.

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Can Breathing Oils or Herbs Calm and Aid Well-Being?

BY LISA WARD

Breathing oils and herbs have been used for centuries to promote relaxation and calm. These natural substances can be inhaled through the nose or mouth, or applied to the skin in the form of a massage.

The act of inhaling essential oils can trigger a response in the brain that promotes relaxation and reduces stress. When the oils are inhaled, they travel through the bloodstream and into the brain, where they can affect mood and cognitive function.

Herbs such as lavender and chamomile are also effective in promoting relaxation. These herbs can be used in a variety of ways, including as a tea, a cream, or as a massage oil.

In addition to their calming effects, breathing oils and herbs can also improve the immune system and boost energy levels. They can be used to treat a variety of conditions, including headaches, anxiety, and insomnia.

If you are interested in using breathing oils or herbs to promote relaxation, it is important to consult with a healthcare provider to determine the best method of use and to ensure that you are not allergic to any of the ingredients.

Dr. Lisa Ward

For more information about using breathing oils and herbs to promote relaxation, please contact the American Journal of Nursing at (555) 555-5555.

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Personal Journal

Hooked on the Sun

BY LISA WARD

The sun is an essential part of life, providing us with vitamin D and helping to regulate our circadian rhythm. However, excessive sun exposure can also be harmful, leading to skin damage and an increased risk of skin cancer.

It is important to protect ourselves from the sun's harmful rays. This can be done by wearing sunscreen or using other sun protection measures, such as seeking shade or wearing clothing that covers the body.

In addition to protecting ourselves from the sun, it is also important to enjoy the benefits that sunlight can provide. This can be done by spending time outdoors or engaging in activities that involve being in the sun.

Dr. Lisa Ward

For more information about protecting ourselves from the sun and enjoying its benefits, please contact the American Journal of Nursing at (555) 555-5555.
What are alternative therapies?

• Anything that's typically excluded by conventional medicine
• Some of these therapies are scientifically validated and some are not
Usage for complementary health approaches: 2012 HHS/CDC report

• 17.7% non-mineral, non-vitamin supplement
• 10.9% deep breathing
• 10.1% yoga/tai chi
• 8.4% manipulation
• 8.0% meditation

• 33.2% of US adults used some form of complementary health approaches
• 42.6% usage with college degree or higher
PATIENT:
Doctor, I don't feel well and I'm not sure why.

DOCTOR: I want you to meditate for 20 minutes, twice a day, exercise for at least 30 minutes a day, avoid processed foods, eat plenty of organic fruit and veg, spend more time in nature and less indoors, stop worrying about things you can't control and ditch your T.V. Come back in 3 weeks.
How can we find the evidence?
Which one do you need?
How many of you are practicing integrative medicine right now?

• Eugenol: cinnamate derivative found in clove and cinnamon leaves

• Isolated from the oils with various applications in dentistry
• Tannins: tannic acid is an astringent that is present in many plant leaves and bark
• Used since ancient times as for clotting
• Has anti-microbial, anti-oxidative and anti-inflammatory activity

• Caffeine is used in beverages and medicines
• Alkaloid found in seeds, nuts or leaves
• Similar to adenosine and acts as an adenosine receptor antagonist and stimulates the CNS
Plants as medicine

- Penicillin from fungal molds
- Pseudoephedrine from shrub ephedra
- Opiates from poppies
- Chemotherapy drug vinblastine from Madagascar periwinkle
- Drug companies are looking back at plant sources for medicine
- Herbal teas can be very helpful
New hope in superbug fight: Tasmanian devil milk

By Jen Christensen, CNN
October 17, 2016 3:55 pm

Story Highlights

Peptides in Tasmanian devil milk killed
Stress, how does this effect the dental patient?

- Avoiding dentists
- No shows
- Longer appointments
- Need for referral
- Stress for doctor and staff
- Increased demand on the cardiovascular system
How can we tell if the patient is stressed?

• Eyes
• Forehead
• Hands
• Shoulders/posture

• Heart rate
• Blood pressure
Psychology versus physiology

• Very often the two are interconnected
• A problem with one causes a problem with the other (e.g. panic attack)
• Is it safer to try and maintain baseline physiology/vitals during a dental appointment?
Symptoms of anxiety: The mind body effect working against us!

- Racing heart or skipped beats
- Hyperventilation
- Breathing difficulty
- Choking sensation
- Tingling or numbness

- Shaking
- Chest pain, pressure or discomfort
- Perspiration
- Diarrhea
- Nausea or vomiting
Conventional medicine approach

• Let’s sedate everyone
• This can play a role in death or mishaps in dental office

• Medication can be part of the answer….but maybe let’s try to reduce dosages or find other options altogether
Differentiate yourself!

• Physicians are **not** discussing stress with their patients
• We see the consequences of stress and are in a great position to discuss it
• What would it be like if you could help your patients (and yourself) better manage stress?
• Increase empathy
Music

• A systematic review found that music can moderately reduce pain and anxiety
• Effects before, during and after surgery
• No side effects
• Benefits for the staff


Marconi Union, Weightless
Brief Relaxation Versus Music Distraction in the Treatment of Dental Anxiety

- Both BR and MD reduced dental anxiety significantly
- BR was significantly superior to MD
- BR also was particularly effective in highly anxious subjects, whereas MD did not have a clinically relevant effect on these subjects
- Psychological support techniques can achieve very good results

Essential oils

- To investigate whether ambient orange fragrance can reduce patient anxiety before and during surgical removal of an impacted mandibular third molar.
The mean blood pressure, pulse rate, and respiratory rate were significantly lower in the fragrance group during surgery (from sitting in the dental chair to the end of surgery; $P < .05$).

The Effect of Inhalation of Aromatherapy Blend containing Lavender Essential Oil on Cesarean Postoperative Pain.

- Reduction in pain
- Reduction in NSAID’s used
- Higher levels of satisfaction with analgesia
- Decreased heart rate

Effect of aromatherapy with orange essential oil on salivary cortisol and pulse rate in children during dental treatment: A randomized controlled clinical trial

• Child anxiety level was measured using salivary cortisol and pulse rate before and after treatment in each visit
• Salivary cortisol and pulse rate significantly lower
• Conclusion:
  • Essential oil of orange could reduce salivary cortisol and pulse rate

How can this work?

• Volatile molecules of the oil reach the nasal mucosa and lungs and rapidly diffuse into the blood, causing brain activation
• Neocortex activation occurs, which has an effect on perception of odors and reaches the limbic system
Safer alternatives

- Silexan lavender essential oil 80mg
- Relaxing but does not make them sleepy
- Do not take with other sedatives
- Burping or mild lavender aroma
- Placebo effect?
- Is this a better option for a 70 year old?
Comparison of Lavender to benzodiazepines

• Results demonstrate that silexan is as effective as lorazepam in adults with GAD.

• Sledge hammer versus smaller hammer

Safety profile of valium

• **Contraindications**
  - Myasthenia gravis (allowable in limited circumstances)
  - Acute narrow angle glaucoma and open angle glaucoma unless patients receiving appropriate therapy
  - Severe respiratory depression
  - IV use in shock, coma, depressed respiration, patients who recently received other respiratory depressants
  - Sleep apnea
  - Children <6 months

• **Cautions**
  - Use caution in COPD, sleep apnea, renal/hepatic disease, open-angle glaucoma, depression, suicide ideation, impaired gag reflex, history of drug abuse, or obese patients (prolonged action when discontinued)
  - May impair ability to perform hazardous tasks
  - Use with caution in patients with a history of drug abuse or acute alcoholism; tolerance, psychological, and physical dependence may occur with prolonged use (>10 days)
  - Paradoxical reactions may occur including hallucinations, aggressive behavior, and psychoses
  - Abrupt withdrawal may result in temporary increase of seizures
  - Reduce opiate dose one-third when diazepam is added
Safety of lorazepam (Ativan)

- Sedation
- Dizziness
- Unsteadiness
- Weakness
- Fatigue
- Drowsiness
- Amnesia
- Confusion
- Disorientation
- Depression
- Suicidal ideation/attempt
- Vertigo
- Ataxia
- Sleep apnea
- Asthenia
- Extrapyramidal symptoms
- Respiratory depression

- Tremor
- Convulsions/seizures
- Visual disturbances
- Dysarthria
- Hypotension
- Blood dyscrasias
- Change in libido
- Impotence
- Jaundice
- Increased bilirubin
- Increased liver transaminases
- Increase in ALP
- Hypersensitivity reactions
- Nausea
- Constipation
- Change in appetite
- Paradoxical reactions (anxiety, excitation, agitation, hostility, aggression, rage)
Safety....Patient and provider optimization at its finest!

• Time outs before procedure “Tell me in your own words what we are doing for you today”
• Send clear referral Rx’s (note if a tooth moved into another tooth’s position)
• Written emergency plan and practice
• Safety officer
• Written document for safety breaches
• Do chart audits!!!!
• Look at board rules Chapter 108!!!! (report of death/hospitalization, records.....)
Consider essential oils

• Get on Pubmed and look at research into various oils that might work for you and your office:
  • Orange
  • Lavender
  • Peppermint
Word selections

- Patients are terrified of pain
- Don’t use the pain word
- Implant suggestion of some discomfort after the procedure that will be controlled with anti-inflammatories

- Post procedure suggestion
- Post hypnotic suggestion
If you are smoking you are not optimized!

• Increases risks for surgical and anesthesia complications substantially
• Often relates to stress
• “How would your life be different if you stopped smoking?”
• What is our role for smoking cessation?
Deep breathing

• Significant impact on anxiety and pain perception
• Focused attention
• Stimulation of the parasympathetic chain
• Reduction of sympathetic discharge
• Many different forms such as 4-7-8 or just double the exhale time
• Practice is important
• Use negative cues as a reminder
Hypnosis

• “A state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion.”
Hypnosis

• State of focused attention with increased suggestibility
• Children are the easiest to place into a trance
• Very useful for a variety of medical conditions as well as procedures
How do I use hypnosis?

• Practice hypnotically (tone, volume, pacing, word selection) to decrease sympathetic discharge
• I.V. placement
• Post-hypnotic suggestion
Why did hypnosis become less popular?

• Anesthesia became better
• Drugs became better
• Stage hypnosis created fear

• Hypnosis is really just effective relaxing communication
• Will safety issues make it more popular?
Clinical Report: Mind-Body Therapies in Children and Youth

• “Research suggests benefits of clinical hypnosis for children and adolescents, particularly for functional abdominal pain, IBS and pain management”
Mind - body connection
A lot of science exists for M-B medicine

- Conventional medicine tends to ignore or downplay the effect of the mind on the body
- Great “Fresh Air Podcast” with the author
Placebo effect

• Studies show up to 50% physicians Rx placebo
• Dozens of studies have shown that the power of placebos goes beyond patients’ imagination
• Seem to work best for how patients “feel”
Placebo...it's a favorable response to an intervention

• Most effective for subjective experiences such as pain

• Behind the subjective experience of feeling better (and worse) are **objective changes in brain chemistry** that we've only started to understand
Molecular mechanisms of placebo responses in humans

• Placebo is blocked when naloxone is given to block opioid receptors
• Changes in cerebral blood flow occur (PET neuroimaging)

• Much of this deals with reward and reinforcement mechanisms

How to increase the effect

• Confirm confidence in the treatment
  • “This might work _versus_ this will work!”
• “We have found this to be very helpful for our patients”
• Look for safe options such as salt water rinse
• Magnify the effect of your treatment
What increases the placebo effect?

• How it is presented and by whom
• Cost
• Color
• More invasive has greater effect (surgery > injection > pills)
Be careful of the nocebo effect!

- Nocebo is Latin for “I will harm”
- You may do this unintentionally
- Curses and voodoo death (highly dependent on social and cultural background)
- Most of the side effects to many medications are due to this
- Headache, fatigue, concentration problems
- Be careful of mentioning side effects because you can implant them
So how can we help our patients?

- Conventional and integrative ways to improve their experience:
  - Decrease opioids and antibiotics
  - Have a safety plan at your office and practice
  - Change how you talk about smoking
  - Music
  - Essential oils
  - Breathing
  - Maximize the placebo effect
  - Talk to your patients about stress
Where are you right now?
The first step towards getting somewhere is to decide that you are not going to stay where you are.  

J.P. Morgan
How do we take care of our mind and body

• Eat
• Toxins
• Sleep
• Stress
• Exercise
• Stretching
Stress
“One of the best things I can do for myself when I feel stressed is....”
How do you MANAGE stress?

• Deep breathing
• Meditation
• Spirituality/prayer
• Music
• Walking
• Vigorous exercise
• Cook/gardening
• Friends
• Limit screen time/talk radio

• Apps and the internet can be helpful
  • Headspace (10 for 10)
  • Breathe

• Be aware of your stress
• Use it as a cue
Find ways to decrease stress

• Be proactive
• Have tools in your toolbox
• Get staff involved
• Know the things that contribute to your well-being, and those things that lead to your destruction
• Be mindful and intentional about it

• Engage with others to help

• Don’t isolate yourself
• We are blessed to be a blessing to others
• You are not enough for you
• Depression often happens when we go inwards
• Suffering can be an excessive focus on yourself
• Move beyond yourself
• What are you grateful for?
Soar high to optimize your life!

**Daily Optimizer:**
Gratitude: What 3 *new* things are you grateful for?
Breathe: Be intentional and slow your *exhale* for up to 2 minutes
Stretch: In your chair, against the wall or on the floor
Be mindful of how you EAT/SLEEP/MOVE/THINK

**Weekly Optimizer:**
Conscious acts of kindness: call, email or send a note
What contributes to your well-being and what are things that lead to your destruction?
Happiness: The joy you feel moving towards your full potential

In closing, consider.....

• Most things in life are multifactorial
• Do you need a sledgehammer? Look at all options!
• Get in touch with what is going on physiologically and psychologically with your patient and yourself
• Try integrative medicine techniques in your practice
• Optimize yourself by improving your mind and body
• Know the things that contribute to your well-being, and those things that lead to your destruction
Thursday April 13th, 2017

Join us for a deeper dive:
- Integrative techniques to optimize your life
- Demonstrations of breathing, guided relaxation and hypnotic techniques
- Demonstrations of word selections

• To RSVP send an email to: Heather@texasddsmd.com