

NOVEL APPLICATIONS OF MANUAL THERAPY WITHIN INTEGRATIVE REHABILITATION PRACTICE

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OBJECTIVES

1. DESCRIBE SIMPLE PRACTICES TO CREATE AND SUSTAIN CLINICIAN AND CLIENT PRESENCE WITHIN THE THERAPEUTIC ENCOUNTER.
2. IDENTIFY THREE NEW WAYS TO ENGAGE IN MANUAL THERAPY AS A TOOL FOR GUIDING THE CLIENT IN SELF-REGULATING THE NERVOUS SYSTEM TO INFLUENCE PERSISTENT PAIN.
3. REFLECT WITH AN OPEN MIND AND SPIRIT OF CURIOSITY UPON THE NON-PUTATIVE ASPECTS OF MANUAL THERAPY AND GENERATE ONE QUESTION ABOUT THE POTENTIAL INFLUENCE OF TOUCH UPON HEALING.

PREPARATION

GOAL

- CONSIDER WHY YOU ARE ATTENDING THIS WEBINAR. WHAT DO YOU HOPE TO LEARN TO SUPPORT YOUR PRACTICE?

INTENTION

- WHAT STATE OF HEART-MIND MIGHT SUPPORT YOUR LEARNING EXPERIENCE TODAY?

PRESENCE

- NOTICE THE SOUNDS IN YOUR ENVIRONMENT. LOCATE ONE SOUND THAT IS MOST DISTANT. LOCATE ONE SOUND THAT IS MOST CLOSE.
- IDENTIFY A PLACE ON YOUR BODY THAT YOU FEEL MOST AWARE OF IN THIS MOMENT.

LANGUAGE OF TOUCH

TOUCH

TO PERCEIVE THROUGH THE TACTILE SENSE.

TO HANDLE OR FEEL GENTLY USUALLY WITH THE INTENT TO UNDERSTAND OR APPRECIATE.

THERAPEUTIC TOUCH

A FORM OF COMPLEMENTARY AND ALTERNATIVE MEDICINE BASED ON THE BELIEF THAT VITAL ENERGY FLOWS THROUGH THE HUMAN BODY. THIS ENERGY IS SAID TO BE BALANCED OR MADE STRONGER BY PRACTITIONERS WHO PASS THEIR HANDS OVER, OR GENTLY TOUCH A PERSON'S BODY.

LANGUAGE OF TOUCH

SOCIAL TOUCH QUALITIES

- SENSORY QUALITY
 - CT OPTIMAL TOUCH / AFFECTIVE
 - TARGETS CT FIBERS OF SKIN, USING A GENTLE CARESS
- INTERPERSONAL
 - TAPS ON SHOULDER, EMBRACING, HAND HOLDING, CONVEYING EMOTION



COVID PANDEMIC REDUCTIONS IN SOCIAL TOUCH

- ASSOCIATED WITH INCREASED FEELINGS OF DEPRESSION, ANXIETY AND LONELINESS

LANGUAGE OF TOUCH

DISCRIMINATORY TOUCH

- ANALGESIC
- SOMATOPERCEPTUAL

FAST TOUCH LARGE MYELINATED AFFERENT PROJECTIONS TO SOMATOSENSORY CORTICES

- ASSOCIATED WITH MODULATORY EFFECTS OF MANUAL THERAPY ON CNS AND ANS

AFFECTIVE CATEGORY

- SLOW TOUCH - UNMYELINATED MECHANOSENSITIVE PROJECTIONS TO EMOTION RELATED PARALIMBIC SYSTEMS / INSULAR CORTEX
 - ASSOCIATED WITH HEDONIC AND EMOTIONAL COMPONENTS OF REWARD AND SOCIAL COMMUNICATIONS

LANGUAGE OF TOUCH

SELF- COMPASSIONATE TOUCH / SOOTHING TOUCH

- COMPASSION – ETYMOLOGY IS \TO SUFFER WITH.
 - COMPASSION IS THE RECOGNITION OF THE PRESENCE OF SUFFERING IN SELF OR OTHERS, COMBINED WITH THE HEARTFELT DESIRE TO ACT TO ALLEVIATE SUFFERING.
- SELF-COMPASSION DIRECTS COMPASSION INWARDLY.
 - REVERSE APPLICATION OF THE GOLDEN RULE TO ONESELF
 - ASSOCIATED WITH INCREASE, GROWTH MINDSET, AUTHENTICITY, POSITIVE AFFECT, REDUCTIONS IN STRESS AND PSYCHOPATHOLOGY

SELF-COMPASSION

KEY COMPONENTS OF SELF-COMPASSION

- RECOGNIZING SUFFERING MAY BE PRESENT,
- ACKNOWLEDGING SUFFERING AS COMMON TO HUMANITY / PART OF THE HUMAN EXPERIENCE
- MINDFUL AWARENESS OF FEELINGS AND EMOTIONS CONNECTED TO SUFFERING
- MINDFUL ALLOWING OF WHATEVER IS ARISING TO BE PRESENT AND TO BE ABLE TO:
 - CHOOSE TO STAY WITH THE DISCOMFORT /UNPLEASANTNESS OR
 - TAKE ACTION TO RELIEVE SUFFERING

THERAPEUTIC TOUCH AND BIOFIELDS

SENSING 'VITAL FLOW'

'BIOFIELD REFERS TO AN ORGANIZING PRINCIPLE FOR THE DYNAMIC INFORMATION FLOW THAT REGULATES BIOLOGICAL FUNCTION AND HOMEOSTASIS.

BIOFIELD INTERACTIONS CAN ORGANIZE SPATIOTEMPORAL BIOLOGICAL PROCESSES ACROSS HIERARCHICAL LEVELS- FROM THE SUB ATOMIC, ATOMIC, MOLECULAR, CELLULAR, ORGANISMIC TO THE INTERPERSONAL AND COSMIC LEVELS.

AS SUCH, BIOFIELD INTERACTIONS CAN INFLUENCE A VARIETY OF BIOLOGICAL PATHWAYS, INCLUDING BIOCHEMICAL, NEUROLOGICAL AND CELLULAR PROCESSES RELATED TO ELECTROMAGNETISM, CORRELATED QUANTUM INFORMATION FLOW AND PERHAPS OTHER MEANS FOR MODULATING ACTIVITY AND INFORMATION ACROSS HIERARCHICAL LEVELS OF BIOLOGY.' SOURCE- REIKI IN CLINICAL PRACTICE- A SCIENCE-BASED GUIDE



NO SCIENTIFIC COMMUNITY AGREEMENT ON BIOFIELD DEFINITION, COMPONENTS OR MEANS OF MEASUREMENT.

PAUSE FOR A FEEDBACK S.A.L.A.D.

WHAT HAS ...

SURPRISED YOU?

ANNOYED YOU?

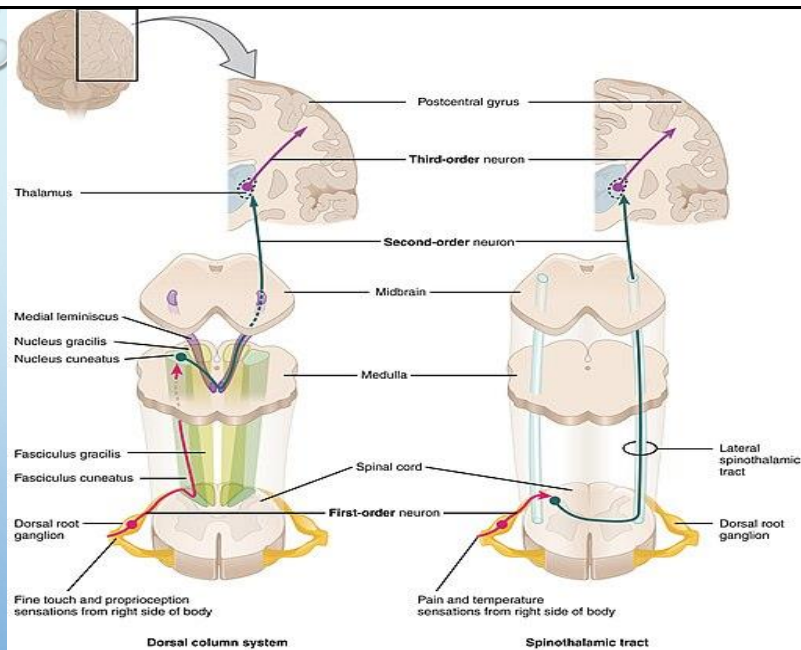
LOST YOU?

APPLIED TO YOU?

WHAT HAVE YOU...

DISAGREED WITH?

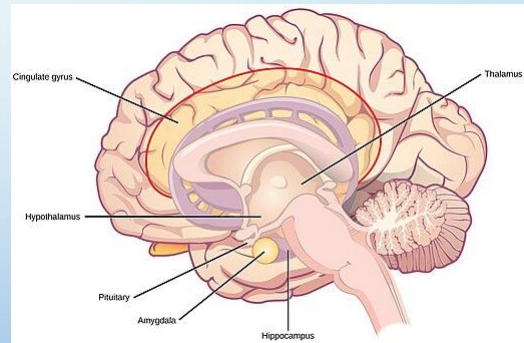
EXPERIENTIAL ACTIVITY PRESENCE BRIEF BODY SCAN 5 SENSE CHECK IN



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SENSORY PATHWAYS

- THALAMUS, SOMATOSENSORY CORTEX
 - 17 SUBTYPES OF SOMATOSENSORY NEURONS
- PERCEPTION OF TOUCH IS INFLUENCED BY
 - INSULA
 - ACC
 - HIPPOCAMPUS
 - AMYGDALA& PFC



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NEURAL DEVELOPMENT OF TOUCH

- TOUCH IS THE FIRST SENSE TO DEVELOP IN UTERO
- SKIN ORIGINATES FROM ECTODERM AND MESODERM
- DORSAL ROOT GANGLIA DEVELOPS IN PARALLEL WITH SKIN IN ONE OF FIRST WAVES OF SPECIFICATION FROM THE NEURAL TUBE
- MULTIPLE MECHANORECEPTOR TYPES ARE LOCATED IN SKIN
- FETUS EXPLORES FACE AND MOUTH WITH ITS HAND

MOTHER TO FETUS BI-DIRECTIONAL SENSORY FLOW

ENVIRONMENTAL AND INTEROCEPTIVE CUES ARE TRANSMITTED

- MOTHERS MOVEMENTS, HEARTRATE, TOUCH STIMULI, NERVOUS SYSTEM SOMATOSENSORY RESPONSES TO HER SOCIAL CUES
- BILATERAL CARDIAC SYNCHRONY
- GROUNDWORK IS LAID FOR FETAL HOMEOSTATIC MECHANISMS

TOUCH AND TRAUMA

INFLUENCE OF ACE'S (ADVERSE CHILD OR COMMUNITY EXPERIENCES)

- REDUCED INTERPERSONAL TRUST
- ALTERATIONS IN SOCIAL PROCESSING AND COGNITION
- LARGER RANGE OF PREFERRED SOCIAL DISTANCE
- GENERATES SENSORY SYSTEM HYPERSENSITIVITY IN SOME AND BLUNTING IN OTHERS
 - BODY DISSOCIATION FOUND TO MEDIATE EMOTIONAL DYSREGULATION
- REDUCED RELATIONSHIP QUALITY AND EMOTIONAL INTIMACY

TOUCH AND TRAUMA

PTSD IS PREVALENT IN TRAUMA SURVIVORS AND CAN CREATE

- DIFFICULTY WITH SENSORY FILTERING
- TENDENCY FOR SENSATION AVOIDANCE-EVEN WITH PARTNERS
- ANHEDONIA
- ANXIOLYSIS
- REACTIVE SALIENCE NETWORK WITH TENDENCY TO CLASSIFY SENSORY STIMULI AS THREATENING
- ALTERATIONS IN OXYTOCIN, DOPAMINE AND OPIOID SYSTEMS RELATIVE TO PROCESSING OF REWARD
- CHANGES IN THE HIPPOCAMPUS

TOUCH AND TRAUMA

TRAUMA SURVIVORS MAY ALSO EXHIBIT

- ALTERED MULTI-SENSORY INTEGRATION
- REDUCED CONTEXTUAL MEANING OF INTEROCEPTIVE INFLUENCES
 - POSSIBLE CHANGES IN SIZE OF AND FUNCTIONAL CONNECTIVITY OF INSULA TO HIGHER CORTICAL STRUCTURES
- ALTERATIONS IN HPA AXIS FUNCTION
 - VARY ACROSS STUDIES
- FLASHBACKS IN RESPONSE TO TOUCH IF SURVIVORS OF DOMESTIC ABUSE AND/OR SEXUAL VIOLENCE

EXPERIENTIAL ACTIVITY

SOOTHING TOUCH TECHNIQUE

- HANDS ON HEART OR BELLY OR ONE HAND ON EACH OR
- PLACING HANDS ANYWHERE THAT GENERATES COMFORT
- INVITE FEELINGS OF WARM-HEARTEDNESS, LOVING KINDNESS
 - INVOKE PRESENCE OF A COMPASSIONATE OTHER – LIVING OR PASSED, HUMAN OR ANIMAL
 - INVOKE A MEMORY OF RECEIVING COMPASSION
- FREQUENCY OF PRACTICE IS KEY
 - MICRO PRACTICES ARE ALSO BENEFICIAL

DO YOU ENGAGE IN THIS PRACTICE?

ARE YOU COMFORTABLE TEACHING THIS TO PATIENTS?

PAUSE FOR A FEEDBACK S.A.L.A.D.

WHAT HAS ...

SURPRISED YOU?

ANNOYED YOU?

LOST YOU?

APPLIED TO YOU?

WHAT HAVE YOU...

DISAGREED WITH?

MANUAL THERAPY

LANGUAGE – MANUAL THERAPY

THE SYNERGISTIC APPLICATION OF MOVEMENT-ORIENTED STRATEGIES INTEGRATING EXERCISE AND MANUALLY APPLIED MOBILIZATION AND MANIPULATION PROCEDURES DELIVERED ALONG A CONTINUUM OF SKILLED PASSIVE AND ACTIVE MOVEMENT THAT INVOLVES THE APPLICATION OF **SKILLED MECHANICAL AND MOVEMENT-ORIENTED STIMULI** THAT PRODUCES A CHAIN OF MECHANICAL AND NEUROPHYSIOLOGICAL RESPONSES INCLUDING:

- DECREASES IN PAIN AND SYMPTOM MODULATION,
- INCREASES IN RANGE OF MOTION,
- MODULATION OF INFLAMMATORY MEDIATORS,
- AUTONOMIC, NEUROMUSCULAR AND ENDOCRINE RESPONSE THAT ARE MEDIATED BY INDIVIDUAL CONTEXTUAL FACTORS

[HTTPS://GUIDE.APTA.ORG/INTERVENTIONS/CATEGORIES-INTERVENTIONS/MANUAL-THERAPY-TECHNIQUES](https://guide.apta.org/interventions/categories-interventions/manual-therapy-techniques)

MANUAL THERAPY TECHNIQUES

- MANUAL LYMPHATIC DRAINAGE.
- MANUAL TRACTION.
- MASSAGE:
 - CONNECTIVE TISSUE MASSAGE.
 - THERAPEUTIC MASSAGE.
- MOBILIZATION OR MANIPULATION/THRUST TECHNIQUES:
 - SOFT TISSUE.
 - SPINAL AND PERIPHERAL JOINTS.
- NEURAL TISSUE MOBILIZATION.
- PASSIVE RANGE OF MOTION.
- DRY NEEDLING

[HTTPS://GUIDE.APTA.ORG/INTERVENTIONS/CATEGORIES-INTERVENTIONS/MANUAL-THERAPY-TECHNIQUES](https://guide.apta.org/interventions/categories-interventions/manual-therapy-techniques)

TOUCH IN CONTEXT OF MANUAL THERAPY

ASSISTS IN FORMING A SOLID THERAPEUTIC ALLIANCE

- A COLLABORATIVE RELATIONSHIP NECESSARY TO ESTABLISH POSITIVE RAPPORT AND TRUST
 - FEATURES AGREEMENT ON GOALS AND TASKS
 - INVOLVES DEVELOPMENT OF ATTACHMENT BONDS
 - CALL FOR ADAPTING PERSONAL OPINIONS TO BE IN TUNE WITH PATIENT

PROMOTES COOPERATIVE INTERPERSONAL COMMUNICATION

- INCREASES PATIENT PARTICIPATION AND ADHERENCE TO EXERCISES

DEMONSTRATES EMPATHY

- EMPATHY IS A PREREQUISITE TO FOSTERING PROSOCIAL BEHAVIOR



TOUCH IN CONTEXT OF MANUAL THERAPY

HYPOTHESIZED TO PROMOTE BIOBEHAVIORAL SYNCHRONY

- INDIVIDUALS HARMONIZE BIOLOGICAL AND BEHAVIORAL PROCESSES DURING SOCIAL INTERACTION
 - MATCHING NON-VERBAL BEHAVIORS
 - COUPLING OF BREATH, HEART AND BRAIN RHYTHMS
- ASSISTS IN OVERCOMING UNCERTAINTY
- INFERS MENTAL STATES BETWEEN THERAPIST AND PATIENT



TOUCH IN CONTEXT OF MANUAL THERAPY

TOUCH PLAYS A ROLE IN ACTIVE INFERENCE

- ACTIVE INFERENCE IS **A WAY OF UNDERSTANDING SENTIENT BEHAVIOR**—A THEORY THAT CHARACTERIZES PERCEPTION, PLANNING, AND ACTION IN TERMS OF PROBABILISTIC INFERENCE.

TOUCH

- CAN UPDATE CURRENT BODY STATE
- CAN REVEAL PREDICTION ERRORS IN MOVEMENT
- GUIDED MOTIONS CAN ASSIST IN RE-FRAMING NOXIOUS STIMULI AND FEAR OF MOVEMENT

CLINICAL EXAMPLES?



PERSPECTIVE TAKING OPPORTUNITY....
 CONSIDER MANUAL THERAPY AS AN OPPORTUNITY
 TO INTER-RELATE VIA EFFECTS OF THERAPEUTIC TOUCH



Creative Common Attribute ;Photo by Frank Barning: <https://www.pexels.com/photo/person-getting-a-massage-5266394/>

PHYSIOLOGICAL RESPONSES TO TOUCH AS MANUAL THERAPY

ALLOSTASIS IS THE PRIMARY FUNCTION OF THE NERVOUS SYSTEMS

- AN ADAPTIVE, ANTICIPATORY PROCESS FOR ACHIEVING HOMEOSTATIC BALANCE USING PHYSIOLOGICAL / AUTONOMIC AND BEHAVIORAL/SENSORIMOTOR CLOSED FEEDBACK LOOPS.

TOUCH ASSISTS IN REGULATING ALLOSTASIS

- PROVIDES EMBODIED PREDICTIONS ABOUT SOCIAL ATTACHMENT
- NECESSARY FOR CO-REGULATION WITH OTHERS

ALLOSTATIC LOAD REFERS TO CUMULATIVE BURDEN OF CHRONIC STRESS AND LIFE EVENTS.

PHYSIOLOGICAL RESPONSES TO TOUCH AS MANUAL THERAPY

TOP DOWN AND BOTTOM UP RESPONSES

- PAIN MODULATION
 - REDUCED HR AND BP

- POTENTIAL FOR POSITIVE INFLUENCE ON SENSE OF SELF, BODY AWARENESS , BODY AUTONOMY
 - REDUCED FEAR AVOIDANCE
 - PROMOTE SAFETY

- MASSAGE TECHNIQUES INDUCES RELAXATION

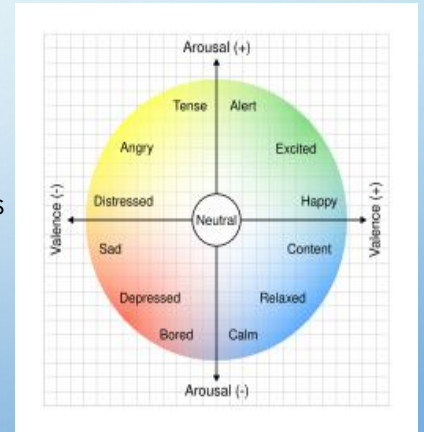


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LANGUAGE ABSENT FROM GUIDE TO PT PRACTICE

- | | |
|-----------------|------------------------|
| • ATTUNEMENT | • PRESENCE |
| • AGENCY | • PERSON-CENTERED CARE |
| • BIOFIELDS | • SELF-REGULATION |
| • COHERENCE | • THERAPEUTIC ALLIANCE |
| • CO-REGULATION | • TRAUMA INFORMED CARE |
| • ENERGY | • WHOLE-PERSON HEALTH |
| • HEALING | |

EXPERIENTIAL
ACTIVITY
APPRECIATING
YOUR
HANDS

Earth Element

Smell

Water Element

Taste

Fire Element

Vision

Air

Touch

Space

Hearing



From Mudras for Healing and Transformation
by Joseph and Lilian Le Page

PAUSE FOR A FEEDBACK S.A.L.A.D.

WHAT HAS ...

SURPRISED YOU?

ANNOYED YOU?

LOST YOU?

APPLIED TO YOU?

WHAT HAVE YOU...

DISAGREED WITH?

REFLECTION

GIVEN THIS OVERVIEW OF TOUCH, ARE YOU ONLY IMPARTING '*SKILLED MECHANICAL AND MOVEMENT ORIENTED STIMULI*' TO YOUR 'PATIENT' WITH MANUAL THERAPY ?

IS THE PATIENT EXPERIENCE LIMITED TO BEING *THE RECIPIENT* OF MANUAL THERAPY ?

GENERATE ONE QUESTION ABOUT THE POTENTIAL INFLUENCE OF TOUCH UPON HEALING.

SOCIAL TOUCH LONELINESS DECLARED AS A PUBLIC HEALTH CRISIS

SOCIAL TOUCH - SOCIAL EFFECTS

- DEFUSING/STRESS RELIEVING
- PROMOTES SENSE OF TOGETHERNESS
- IMPROVES QUALITY OF HEALTH PROFESSIONAL–PATIENT INTERACTION
- PROMOTES- PRO-SOCIAL BEHAVIOR IN TARGET PERSON

SOCIAL TOUCH ALSO CONVEYS EMOTION

- ANGER
- DISGUST
- FEAR
- HAPPINESS
- SADNESS
- LOVE
- SYMPATHY
- EMBARRASSMENT
- ENVY
- SURPRISE

Reports of up to 83 percent reliability

SHORT –TERM PHYSIOLOGICAL EFFECTS OF SOCIAL TOUCH

- SUBJECTIVE PAIN MODULATION
- INCREASED RELEASE OF ENDOGENOUS OPIOIDS
- INCREASED PRODUCTION OF DOPAMINE AND OXYTOCIN
- INCREASED HEART RATE VARIABILITY WITH ROMANTIC PARTNER TOUCH
- TOUCH OF HEAD AND FACE IN ADULTS WAS MOST BENEFICIAL

SHORT –TERM PHYSIOLOGICAL EFFECTS OF SOCIAL TOUCH

- REGULATION OF CORTISOL LEVELS
- REDUCED FEELINGS OF DEPRESSION, STATE AND TRAIT ANXIETY
 - STRONGER EFFECTS ARE NOTED IN CLINICAL COHORTS
- INCREASED BIRTHWEIGHT IN NEWBORNS- ESPECIALLY WITH PARENTAL TOUCH
 - ESTIMATES THAT MOTHERS TOUCH THEIR INFANTS 65 PERCENT OF THE TIME IN FIRST YEAR OF LIFE

CONTEXTUAL FACTORS MEDIATING PERCEPTION OF SOCIAL TOUCH

- TOUCHER'S CHARACTERISTICS
 - PERCEIVED SAMENESS VS PREJUDICE
 - PARTNER / SIGNIFICANT OTHER
 - FACIAL EXPRESSION
 - PHYSICAL ATTRACTIVENESS
- TARGET PERSON
 - LEVEL OF ATTENTIVENESS TO TOUCH
 - NEED FOR TOUCH- E.G. LONELINESS
 - TRAUMATIC LIFE EVENTS
 - CULTURAL ACCEPTABILITY

CONTEXTUAL FACTORS MEDIATING PERCEPTION OF SOCIAL TOUCH

- MULTI-MODAL SENSE ENVIRONMENT - PLEASANT OR UNPLEASANT
- IN CHILDREN AND ADULTS, TYPE OF TOUCH AND KNOWING THE TOUCHER WERE NOT RELEVANT
- SKIN TO SKIN CONTACT MORE PLEASANT THAN INSTRUMENTS OR ROBOTIC TOUCH

LONGER TERM EFFECTS OF SOCIAL TOUCH

IN QUESTIONNAIRE BASED STUDIES

- FREQUENT EXPOSURE TO PARTNER PHYSICAL TOUCH IS RELATED TO
 - REDUCTION IN RESTING HEART RATE AND BLOOD PRESSURE
 - STRONGER SENSE OF PSYCHOLOGICAL INTIMACY
 - INCREASED POSITIVE AFFECT
- FREQUENCY OF INTIMATE PARTNER TOUCH DECLINES FROM DATING TO MARRIAGE
- PEOPLE WHO LIVE ALONE EXPERIENCE SIGNIFICANTLY LESS TOUCH

EXPERIENTIAL ACTIVITY INTEROCEPTIVE SENSING

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