THE SCIENCE BEHIND JOOL: Purpose
Why JOOL is Good for You

These days, there seems to be a pill for everything -- sleep, weight loss, high blood pressure, depression…the list goes on. But what if we told you there’s a wonder drug that can address all of these, and isn’t accompanied by a laundry list of unwanted side-effects?

We’re talking about purpose. A growing body of evidence shows having a life purpose is good for both our bodies and minds. This booklet contains summaries of some of those studies, demonstrating how purpose can improve overall well-being, help manage existing health conditions, and even assist in preventing the onset of future illness or disease.

And purpose doesn’t stop there. As you’re reading, you’ll notice that purpose is also associated with improvements in energy, willpower, and S.P.A.C.E. (Sleep, Presence, Activity, Creativity, and Eating) -- which all contribute to greater health and well-being.

Purpose and health are a two-way street: Being healthy helps you live out your purpose, and living with purpose leads to greater health.

We hope you enjoy learning why purpose, and JOOL, are so good for you!

Sincerely,
Dr. Agatha Radberger, Medical Advisor
and the JOOL Health Team

JOOLHEALTH
PURPOSE, QUALITY OF LIFE AND YOU
Promotes healthier aging
Enhances sleep quality
Improves sexual satisfaction
Encourages healthy eating
Improves mental health, post-spinal cord injury
Key predictor of life quality, post-stroke
Increases levels of energy and willpower

PREVENTIVE HEALTH
Increases longevity
Repairs and protects DNA
Reduces risk of stroke
Decreases risk of heart attack
Strengthens the immune system
Lowers incidence of depression
Lessens risk of developing Alzheimer’s
Lowers levels of stress hormone
Reduces risk of adverse cardiovascular outcomes
Increases use of preventive healthcare services

MANAGING DISEASE
Improves diabetes management
Enhances recovery from anxiety disorder
Reduces risk of recurrent depression
Enhances pain tolerance
Enhances post-traumatic growth
Reduces inflammatory cell production
Improves recovery from addiction
Enhances cognitive functioning for Alzheimer’s patients
PURPOSE, QUALITY OF LIFE AND YOU

Quality of Life. We’ve all heard of it, but what does it really mean?

Pretty much everything related to our physical and mental health can be considered a part of “quality of life” -- including sleep, diet, energy, and mood. And it turns out quality of life plays a big role in our daily life, can predict the likelihood of our becoming sick, and even how long we’ll live. Just as remarkable, having a life purpose can help improve your overall quality of life.

PROMOTES HEALTHIER AGING

This meta-analysis of 70 studies found that a strong purpose in life during middle to old age was associated with improved physical health, increased everyday competence, being married, being employed, and having a higher socioeconomic status. Additionally, results showed a strong association between having a purpose in life and having a good social network with quality relationships.


ENHANCES SLEEP QUALITY

Acting on the premise that sleep disorders become more common as we age, this study focused on a population of adults 50 years and older to determine whether having a strong life purpose proved beneficial in reducing the onset of sleep disorders. Over a four-year follow-up, results showed that for every unit of increase on a six-point scale of purpose, there was a 16% reduction in the odds of developing sleep disturbances.


IMPROVES SEXUAL SATISFACTION

This study was designed to help understand how having a purpose in life affected the sexual well-being of middle-aged women. It was found that enhanced sense of purpose in life, as measured by a self-assessment Life Engagement Test, was associated with significantly improved enjoyment of sexually intimate activities.


**ENCOURAGES HEALTHY EATING**

Previous research has shown that sports fans can be positively or negatively affected by their team’s successes or failures. In particular, losses by the favored team can have a significant negative impact on fans’ self-regulating behaviors. While this study found that NFL fans consumed significantly more saturated fat when their teams lost, a simple moment of positive self-affirmation of core values before the game eliminated the unhealthy consequences of a team loss.


**IMPROVES MENTAL HEALTH, POST-SPINAL CORD INJURY**

This study was carried out to examine how mental health and psychological factors change over time after recent spinal cord injury. Researchers also wanted to see if a change in psychological factors was associated with changes in mental health. It was concluded that purpose in life, along with other factors including self-acceptance, self-efficacy, and mastery, proved to be most promising as interventions.


**KEY PREDICTOR OF LIFE QUALITY, POST-STROKE**

Factors influencing post-stroke health-related quality of life (HRQOL) are important to consider when developing widely applicable therapies for stroke patients. Based on studies in Ibadan and Berlin, stroke severity, disability, emotional disorder, and sense of purpose in life were the key predictors of HRQOL after stroke.


**INCREASES LEVELS OF ENERGY AND WILLPOWER**

How people maintain or effectively refresh energy throughout the work day is explored in this study. It was found that work-related approaches, for instance, setting a work-goal or work purpose, were very likely to boost motivation at work, energize employees, and keep them more engaged.


This study examined how the decision to pursue either intrinsic or extrinsic goals after college graduation could affect well-being. A positive association was found between well-being and pursuing intrinsic goals such as personal growth, close relationships, or community involvement. By contrast, striving after extrinsic motivators like money, fame, or image was found to have a negative impact on psychological well-being.


This study looked at how variations in feeling personally in control vs. being directed by others affects individual happiness and vitality. Results indicated that a sense of personal autonomy helps maintain and enhance both vitality and happiness in those carrying out externally defined tasks. This is a finding significant to individuals charged with increasing feelings of energy and well-being within an organizational context.


There are many conditions (e.g. heart disease, stroke, and diabetes) that are avoidable by making healthy lifestyle choices.

Changes like walking more, eating smaller portion sizes, or having a sense of purpose in life, can go a long way toward keeping yourself healthy for as long as possible.

INCREASES LONGEVITY

This 15-year study of adults aged 65 years and older identified that the likelihood of death decreased with a strengthened sense of life purpose. Individuals with a stronger sense of purpose also rated their health more favorably and experienced fewer functional limitations.


This 14-year study examined if finding a life purpose leads to an increase in years of life. The findings concluded that establishing a life purpose increases longevity across all years of adulthood. It turns out, having a strong purpose in life is just as important in younger years as it is in older years. These findings were consistent even when controlling for other markers of psychological well-being.


REPAIRS AND PROTECTS DNA

Increased telomerase activity, an indication of improved DNA repair, decreases with chronic psychological stress. Results from this study suggest that purpose in life is a direct predictor of increased telomerase activity, supporting better cell health and longevity. Increased telomerase activity was also linked to meditative practices, a sense of autonomy, and decreased negative emotionality.


REDUCES RISK OF STROKE

The objective of this study was to determine whether purpose in life is associated with reduced incidence of stroke amongst adults 50 years and older. Results indicated that people with a strong sense of purpose were significantly less likely to have a stroke during a four-year follow up.


DECREASES RISK OF HEART ATTACK

This study showed that, among adults 50 and over, with a previous diagnosis of coronary heart disease but no previous occurrence of a heart attack, there was a 27% reduction in the odds of experiencing a heart attack for every unit increase on a six-point purpose in life scale.


**STRENGTHENS THE IMMUNE SYSTEM**

This study was conducted in order to understand the potential health benefits of psychological well-being on the immune system. A relationship was found between stronger well-being, which encompasses a life purpose, and decreased expression of pro-inflammatory genes along with increased expression of genes involved in antibody synthesis. These findings indicate that our immune system becomes stronger when we focus on self-realization and life meaning.


**LOWERS INCIDENCE OF DEPRESSION**

Lower levels of well-being have been thought to strongly influence onset of depression. In this 10-year study, it was concluded that older adults who had higher positive well-being (measured by self-acceptance, autonomy, purpose in life, positive relationships with others, environmental mastery and personal growth) were two times less likely to be depressed than those lower positive well-being.


Results from this study showed that engagement of adolescents in pro-social eudaimonic activities, such as helping out family and friends, predicted decreased depressive symptoms over time in comparison to adolescents who engaged in hedonic, or pleasure seeking, activities. This well-being response might be due to increased feelings of mastery, competence, fulfillment, and improved social relationships.


**LESSENS RISK OF DEVELOPING ALZHEIMER’S**

This seven-year study was conducted to determine if purpose in life is a predictor of developing Alzheimer’s disease among older adults. It was found that those who started with greater purpose in life were substantially (2.4 times) less likely to develop Alzheimer’s disease than those with a low score of purpose in life. A higher score of purpose in life was also associated with reduced risk of a heart attack, and a slower rate of cognitive decline.


**LOWERS LEVELS OF STRESS HORMONE**

Cortisol, a hormone released in response to stress, causes undesirable inflammation in the body. Although this study had a limited sample size, early findings show that older women with higher levels of purpose in life had lower cortisol levels than those with lower levels of purpose. Higher purpose in life in this population was also associated with lower levels of proinflammatory cytokines, lower risk of cardiovascular disease, higher levels of good HDL cholesterol, and longer duration of REM sleep.


REDUCES RISK OF ADVERSE CARDIOVASCULAR OUTCOMES

This meta-analysis investigated the link between purpose in life, mortality, and cardiovascular events. It was determined that high purpose in life is a significant predictor of reduced all-cause mortality, cardiovascular disease, heart attack, and stroke.


INCREASES USE OF PREVENTIVE HEALTHCARE SERVICES

This six-year study followed adults aged 50 and older in order to analyze how purpose in life is associated with healthcare use and cost. Results show that adults with a stronger purpose in life were more likely to engage in preventive measures, (e.g. obtaining a cholesterol test, colonoscopy, mammogram, pap smear or prostate examination), than those with a lower sense of purpose in life. Additionally, every unit increase in purpose on a six-point scale was associated with a 17% reduction in the number of reported nights spent in the hospital.


MANAGING DISEASE

It’s a fact. Chronic diseases are the leading cause of disability and illness in the US.

Living with chronic disease can feel limiting, but learning to manage and cope with a condition can be empowering -- and lead to improved health. Even better, having a strong sense of purpose in life can help people manage chronic disease and maintain a higher quality of life.

IMPROVES DIABETES MANAGEMENT

This study looked at purpose in life as a predictive factor for management of Type 2 diabetes. An inverse relationship was found between strength of purpose in life and HbA1c levels, suggesting that commitment to a life purpose leads to improved management of diabetes.


ENHANCES RECOVERY FROM ANXIETY DISORDER

Well-being therapy (WBT) focuses on enhancing autonomy, personal growth, environmental mastery, purpose in life, positive relations, as well as self-acceptance and has been shown to be effective in enhancing psychological well-being. This research reviews the effectiveness of using cognitive behavioral therapy (CBT) followed by WBT in patients suffering from generalized anxiety disorder and found that the use of these therapies in sequence significantly reduced levels of anxiety.


**REDUCES RISK OF RECURRENT DEPRESSION**

In this six-year study, cognitive behavioral therapy (CBT), including lifestyle modification and well-being therapy (WBT), was compared to clinical management for treatment of lasting symptoms of major depression. Patients who underwent CBT + WBT treatment with lifestyle modifications had significantly lower (40%) relapse rates than those who received clinical management (90%).


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**ENHANCES PAIN TOLERANCE**

This study was designed to explore whether resilience and purpose in life, along with other factors, were related to the ability of healthy women to withstand pain. Results showed that resilience and purpose in life helped increase pain tolerance to both hot and cold, suggesting the potential to adapt to other painful stimuli, including chronic pain.


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**ENHANCES POST-TRAUMATIC GROWTH**

With post-traumatic growth (PTG), an individual experiences positive psychological change after a difficult situation. This outcome is desirable, but difficult to achieve. The goal of this study was to discover what causes some people to experience PTG. Researchers found that leukemia patients undergoing treatment were more likely to experience PTG when they examined and adjusted their core beliefs. Additionally, those with lower levels of spiritual well-being were more likely to experience greater distress.


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Survivors of the Wenchuan (2008) and Lushan (2013) earthquakes in China were followed as part of a study to examine the relationship between the core values they hold and the incidence of post-traumatic stress (PTS) and post-traumatic growth (PTG). It was found that self-transcending values such as vitality, relationships, and conscientiousness are associated with experiencing PTG.


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This study investigated how post-traumatic stress symptoms (PTSS) and post-traumatic growth (PTG), in a group of earthquake survivors, influenced one another over a 2.5-year time period. Findings indicated that initial PTG (possibly a result of positive self-esteem, sense of meaning, and self-control), could reduce the impact of PTSS at later points in time. An initial onset of PTSS, however, could not predict later occurrences of PTG.


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**REDUCES INFLAMMATORY CELL PRODUCTION**

Findings from this study suggest that among women aged 60 years and older, higher levels of well-being were associated with lower biomarkers of inflammation. Since inflammation is a bodily response to illness, low levels of inflammation indicate better health. Positive relations with others and purpose in life were both related to lower levels of inflammatory markers.


IMPROVES RECOVERY FROM ADDICTION

This study explored whether having a purpose in life impacted relapse rates of cocaine abusers who underwent treatment. After six months, participants with a strong sense of purpose experienced lower relapse rates, and fewer days of alcohol and cocaine use.


Self-affirmation of core personal values was examined as a method to promote reduced defensiveness towards graphic warning labels on cigarette packs. Results showed that, relative to controls, self-affirming participants were more motivated to reduce their smoking due to increased acceptance of smoking’s negative effects while also exhibiting higher levels of self-control.


This study set out to explore whether affirming core values reduces reflex responses in threatening situations. Results showed that self-affirmation eliminated reflex responses in threatening situations among individuals who are prone to feeling threatened. It follows that self-affirmation positively affects self-esteem on an emotional level and also influences basic defense reflexes.


Many studies have shown that writing about one’s most important values reduces defensiveness to health-threatening information. This study was designed to identify the mechanism behind this effect and concluded that values affirmation might be beneficial because it leads individuals to experience higher levels of self-transcendence and produces feelings of love and connectedness.


This study examined how having a strong purpose in life may help recovery from stressful situations. Using the eyeblink startle reflex, results confirmed that those participants with a purpose in life had a smaller eyeblink after being shown negative photo stimuli. This decreased sensitivity to stress reflects an enhanced automatic resiliency in our body to negative emotions and potential protection against life’s challenges.


With the repeated findings that self-affirmation of core personal values helps increase the effectiveness of health interventions, this study sought to understand the neural mechanisms involved using fMRI scans. Findings showed that when people who engaged in self-affirmation were shown heath messages, they experienced increased activity in the emotional inhibiting and decision-making part of the brain called the ventromedial prefrontal cortex. This result may indicate that practicing self-affirmation helps individuals find enhanced self-relevance and value in health messaging, as well as the ability to more objectively rate their health behaviors.


ENHANCES COGNITIVE FUNCTIONING FOR ALZHEIMER’S PATIENTS

A study of the aging population found that participants who reported higher levels of purpose in life also exhibited significantly better cognitive function despite the burden of Alzheimer’s disease. The protective effect of purpose in life persisted even after controlling for several potentially confounding variables.


RECOMMENDED READING

LIFE ON PURPOSE - HOW LIVING FOR WHAT MATTERS MOST CHANGES EVERYTHING, Vic Strecher, Ph.D

ON PURPOSE - LESSON IN LIFE AND HEALTH FROM THE FROG, THE DUNG BEETLE, AND JULIA, Vic Strecher, Ph.D

THE WILLPOWER INSTINCT, Kelly McGonigal, Ph.D

MINDFULNESS, A PRACTICAL GUIDE TO AWAKENING, Joseph Goldstein

MAN’S SEARCH FOR MEANING, Viktor E. Frankl, M.D.

EAT MOVE SLEEP - HOW SMALL CHOICES LEAD TO BIG CHANGES, Tom Rath

THE END OF OVEREATING - TAKING CONTROL OF THE INSATIABLE AMERICAN APPETITE, David A. Kessler, M.D.

SMARTS AND STAMINA - THE BUSY PERSON’S GUIDE TO OPTIMAL HEALTH AND PERFORMANCE, Marie-Josee Shaar and Kathryn Britton

59 SECONDS - THINK A LITTLE, CHANGE A LOT, Richard Wiseman, Ph.D

NO SWEAT: HOW THE SIMPLE SCIENCE OF MOTIVATION CAN BRING YOU A LIFETIME OF FITNESS, Michelle Segar, Ph.D
Start Your Journey Here: joolapp.com