

STRESS AND CANCER

THE CURE OF MANY DISEASES IS
UNKNOWN TO PHYSICIANS.....

BECAUSE THEY ARE IGNORANT OF
THE WHOLE.

FOR THE PART CAN NEVER BE WELL
UNLESS THE WHOLE IS WELL.

--Plato

IT IS MUCH MORE IMPORTANT TO
KNOW WHAT SORT OF PATIENT
HAS A DISEASE THAN WHAT
SORT OF DISEASE A PATIENT
HAS.

-- Sir William Osler, MD

HEALTH IS A BALANCE OF MANY PARTS

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PHYSICAL FACTORS

ENVIRONMENTAL FACTORS

EMOTIONAL AND PSYCHOLOGICAL
STATES

NUTRITIONAL HABITS

EXERCISE PATTERNS

THE NATURE OF **STRESS**

THE WORD IMPLIES A PURELY
MENTAL REACTION, BUT
RESEARCH HAS SHOWN THAT
VIRTUALLY EVERY PART OF THE
BODY IS INVOLVED

THE FIGHT-OR-FLIGHT RESPONSE

HYPOTHALAMUS STIMULATION OF
PITUITARY



ACTIVATION OF THYROID AND
ADRENAL GLANDS



FLOODING OF BLOODSTREAM WITH
ADRENALIN, CORTISONE AND
OTHER STRESS HORMONES

THE ENTIRE BODY IS AFFECTED

- HEART RATE INCREASES
- BLOOD PRESSURE RISES
- BREATHING BECOMES FASTER
- BODY MUSCLES TIGHTEN
- FACIAL MUSCLES CONSTRICT
- PUPILS DILATE
- HEARING BECOMES SHARPER
- SUGAR IS SECRETED IN THE BLOOD STREAM
- BLOOD FLOWS TO THE BRAIN AND MUSCLES AND AWAY FROM THE STOMACH AND INTESTINES
- BOWEL AND BLADDER RELAX
- BRAIN WAVE ACTIVITY QUICKENS
- PALMS SWEAT
- BLOOD FLOWS AWAY FROM THE SKIN

THIS FIGHT-OR-FLIGHT RESPONSE
WAS DESIGNED AS A SURVIVAL
MECHANISM FOR OUR DISTANT
ANCESTORS.....

DANGER WOULD ARISE SUDDENLY,
BE EITHER FOUGHT AGAINST OR
FLED FROM AND LIFE WOULD
RETURN TO NORMAL

IN ADDITION, THIS FIGHT-OR-FLIGHT
RESPONSE CARRIES WITH IT AN
EMOTIONAL SAFETY VALVE

BY DISCHARGING THE INTERNAL TENSION,
EITHER IN PHYSICAL STRUGGLE OR ESCAPE,

THE BODY FIRST RELEASES THE BUILT-UP
PRESSURE,

THEN EVENTUALLY GOES TO A POST-STRESS
LET-DOWN PHASE

AND FINALLY RETURNS TO A NEUTRAL NON-
STRESS STATE

IN MODERN TIMES,
THE NATURE OF CIVILIZATION
MAKES THIS RESPONSE
INAPPROPRIATE IN MANY
SITUATIONS.

WE STIFLE THESE RESPONSES FOR
THE SAKE OF PERSONAL
SURVIVAL AND SOCIAL HARMONY

AS THE NUMBER OF SIMILARLY
CHARGED SITUATIONS
INCREASES AND TENSION IS
NOT DISCHARGED,

A STATE OF CHRONIC STRESS CAN
DEVELOP, WITH THE RISK OF
RESULTING HEALTH PROBLEMS

WITH THE WORLD AROUND US
ITSELF BEING INCREASINGLY
AND CHRONICALLY STRESSFUL,
THE TENDENCY IS FOR THE
FIGHT-OR-FLIGHT RESPONSE TO
BE CHRONICALLY ACTIVATED

THE RESULT IS A SLOWLY RISING
LEVEL OF INTERNAL PRESSURE

THIS PROLONGED BUILDUP OF
TENSION AND EXCESSIVE
AROUSAL CAN LEAD TO A HOST
OF DISORDERS.

MANY RESEARCHERS HAVE FOUND
THAT CHRONIC STRESS CAN
WEAR DOWN OUR BODY'S
DEFENCES, LOWERING OUR
IMMUNE RESPONSE AND MAKING
US MORE VULNERABLE TO ALL
SICKNESS, INCLUDING CANCER.

IT IS HOWEVER NOT JUST
EVENTS THAT MATTER

WHEN DIFFICULT AND THREATENING
EVENTS OCCUR, IT IS HOW WE
PERCEIVE AND RESPOND TO THEM
THAT DETERMINES THE INTENSITY OF
THE STRESS.

OUR ATTITUDE ABOUT WHAT WE FEEL
WE SHOULD BE AND OUR IMAGINED
PUNISHMENT IF WE FAIL DETERMINE
HOW WE SEE AND REACT TO EVENTS.

FAILURE IS NOT DEATH; BUT AS LONG AS WE BELIEVE THAT IT IS, OUR BODIES WILL RESPOND WITH THE FIGHT-OR-FLIGHT RESPONSE JUST AS IF WE WERE BEING ATTACKED; EVENTS THAT MIGHT BE HANDLED WITH RELATIVE EASE, INSTEAD CREATE THE CONSTANT BURDEN OF CHRONIC STRESS - WITH THE IRONIC POSSIBILITY OF CREATING AN ACTUAL LIFE-THREATENING ILLNESS IF THE PRESSURE IS NOT REMOVED.

BY ALTERING OUR ATTITUDES
AND TENSION-PRODUCING
HABITS, WE MAY TIP THE
SCALES IN A MORE
HEALTHFUL DIRECTION

AS FAR BACK AS THE 2ND CENTURY,
GALEN NOTED THAT MELANCHOLIC
WOMEN APPEARED TO BE MORE LIKELY
TO DEVELOP CANCER THAN CHEERFUL
ONES.

18TH AND 19TH CENTURY PHYSICIANS
FREQUENTLY NOTED THAT SEVERE
LIFE DISRUPTIONS AND RESULTING
EMOTIONAL TURMOIL, DESPAIR AND
LOSS OF HOPE SEEMED TO OCCUR
BEFORE THE ONSET OF CANCER.

IN 1885, DR. PARKER MADE THE MIND-BODY CONNECTION IN A PROPHETIC WAY BY EMPHASIZING THE PHYSICAL RESULTS OF EMOTION: "THERE ARE THE STRONGEST PHYSIOLOGICAL REASONS FOR BELIEVING THAT GREAT MENTAL DEPRESSION, PARTICULARLY GRIEF, INDUCES A PREDISPOSITION TO SUCH DISEASE AS CANCER, OR BECOMES AN EXISTING CAUSE UNDER CIRCUMSTANCES WHERE THE PREDISPOSITION HAD ALREADY BEEN ACQUIRED."

A QUARTER CENTURY AGO,
LAWRENCE LESHAN STUDIED THE
LIVES OF OVER 500 CANCER
PATIENTS, AND FOUND A
DISTINCT EMOTIONAL LIFE-
HISTORY PATTERN IN 76 PERCENT
OF THE CANCER PATIENTS BUT IN
ONLY 10 PERCENT OF A CONTROL
GROUP THAT DID NOT HAVE
CANCER.

THIS PATTERN HAD FOUR DISTINCTIVE FEATURES:

THE CHILDHOOD WAS MARKED BY EXTREME DIFFICULTY IN ESTABLISHING WARM, SATISFYING RELATIONSHIPS. THE CHILD TRIED TO PLEASE OTHERS FIRST IN ORDER TO WIN AFFECTION.

- IN ADULTHOOD, THE PERSON FOUND STRENGTH AND MEANING IN A RELATIONSHIP OR CAREER AND Poured A GREAT DEAL OF ENERGY INTO THIS VITAL SOURCE OF SUPPORT.
- THE PERSON AGAIN EXPERIENCED A SENSE OF LOSS, DESPAIR, HOPELESSNESS AND HELPLESSNESS WHEN THIS KEY SOURCE WAS REMOVED.
- FEELINGS, ESPECIALLY NEGATIVE ONES LIKE ANGER, HURT AND DISAPPOINTMENT, WERE CONSTANTLY BOTTLED UP. THIS SUPERFICIAL SAINT-LIKE QUALITY WAS A REFLECTION OF A DEEPER INABILITY TO EXPRESS HOSTILITY AND AN OVERCOMPENSATION FOR FEELINGS OF UNWORTHINESS.

POSITIVE ROLE OF EMOTIONS

JUST AS AN ATTITUDE OF
HOPELESSNESS AND
HELPLESSNESS MAY HURT A
PERSON'S CHANCES FOR HEALTH
OR RECOVERY, SO AN ATTITUDE
OF DETERMINATION, HOPE AND
FIGHTING BACK CAN HELP LEAD
TO A POSITIVE OUTCOME.

COPING WITH STRESS

THE PLACEBO EFFECT

THE PLACEBO EFFECT IS ONE OF THE MOST POWERFUL TOOLS AVAILABLE TO THE HEALTH PRACTITIONER.

THE POWER APPEARS TO REST SOLELY ON THE STRENGTH OF THE PATIENT'S POSITIVE BELIEFS AND EXPECTATIONS, IT IS STRONGER IF THE DOCTOR ALSO BELIEVES THAT THE TREATMENT IS EFFECTIVE.

RECENT RESEARCH SUGGESTS THAT THE PLACEBO MAY RELIEVE PAIN BY RELEASING THE BODY'S OWN NATURAL PAINKILLING CHEMICALS.

BIOFEEDBACK

RESEARCH SHOWS THAT IF PEOPLE CAN 'SEE' THEIR INTERNAL BIOLOGICAL ACTIVITY, THEY CAN GENERALLY LEARN TO EXERCISE SOME CONSCIOUS INFLUENCE OVER THAT ACTIVITY.

THIS HAS ALREADY PROVEN EFFECTIVE FOR A BROAD RANGE OF STRESS-RELATED PROBLEMS, LIKE HEART DISORDERS, HIGH BLOOD PRESSURE, MIGRAINE, ASTHMA AND CHRONIC PAIN.

MEDITATION

SIMPLE PERIODS OF DAILY DEEP RELAXATION CAN HAVE IMPORTANT AND LASTING EFFECTS ON A WIDE VARIETY OF STRESS DISORDERS, MOST NOTABLY BEING HIGH BLOOD PRESSURE.

YOGA

YOGA CAN HELP A PERSON REACT TO POTENTIALLY STRESSFUL SITUATIONS IN HEALTHFUL AND PRODUCTIVE WAYS BY COUNTERACTING MANY OF THE BODY'S NATURAL RESPONSES TO STRESS.

AS THE BODY GAINS FLEXIBILITY AND THE BREATH DEEPENS, THE MIND AND EMOTIONS SETTLE INTO GREATER EASE AND BALANCE.

IN QUIET TIMES OF DEEP RELAXATION AND MEDITATION, HABITUAL PATTERNS OF THINKING AND BEHAVING MAY BECOME MORE OBVIOUS AND LEND THEMSELVES TO CHANGE.

FOR A PERSON FACING CANCER,
LEARNING TO COPE WITH STRESS IN A
SELF-NOURISHING WAY CAN BE AN
IMPORTANT FACTOR IN AIDING THE
TREATMENT PROCESS, INCREASING
CHANCES FOR RECOVERY, HELPING TO
PREVENT OR MINIMIZE FLARE-UPS
AND MAXIMIZING THE QUALITY AND
LENGTH OF LIFE.

THE KEY ELEMENTS OF CHANGE ARE:

- ANALYSING AND RESTRUCTURING YOUR LIFESTYLE.
- PRACTICING AND DEVELOPING ENJOYABLE TECHNIQUES FOR REDUCING STRESS.

A RECENT REVIEW OF A WIDE
VARIETY OF STUDIES OVER THE
LAST 25 YEARS ON THE ROLE OF
PSYCHOLOGICAL FACTORS IN
CANCER INCIDENCE LISTED OVER 20
VARIABLES THAT HAVE BEEN
ASSOCIATED WITH THE ONSET OF
CANCER

- STRESSFUL LIFE EVENTS
- DEPRESSION
- SUPPRESSION OF EMOTION
- SOCIAL ISOLATION
- EXCESSIVE ANXIETY
- INHIBITED SEXUALITY
- LONG-STANDING EMOTIONAL CONFLICTS
- CONSTRICTED PERSONALITY TYPE
- RIGIDITY
- SUBMISSIVENESS
- FAÇADE OF PLEASANTNESS

THIS STRESS-CANCER ASSOCIATION
WAS UNRELATED TO AGE, SMOKING,
ALCOHOL USE, OCCUPATIONAL STATUS
OR FAMILY HISTORY OF CANCER.

RESEARCH INDICATES THAT
PSYCHOLOGICAL DEPRESSION IS
RELATED TO IMPAIRMENT OF
MECHANISMS FOR PREVENTING THE
ESTABLISHMENT AND SPREAD OF
MALIGNANT CELLS.

DEPRESSION IS ASSOCIATED WITH
A DECREASE IN THE NUMBER AND
POTENCY OF NATURAL KILLER
CELLS.

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THESE CHANGES OCCUR BECAUSE
IMMUNE CELLS, THROUGH SPECIFIC
RECEPTORS, ARE SENSITIVE TO MANY
OF THE HORMONES,
NEUROTRANSMITTERS AND
NEUROPEPTIDES AFFECTED BY STRESS.

ONE ROLE OF THE IMMUNE SYSTEM IS TO RECOGNIZE AND DESTROY MALIGNANT CELLS WHEN THEY DEVELOP.

IT IS THEREFORE POSSIBLE THAT A WEAKENING OF THE IMMUNE SYSTEM, CAUSED BY STRESS, COULD MAKE SOMEONE MORE SUSCEPTIBLE TO CANCER.

WOMEN WHO WERE THE MOST SOCIALLY ISOLATED AND FELT LONELY HAD A SIGNIFICANTLY GREATER INCIDENCE OF CANCER. SOCIALLY ISOLATED MEN, ONCE THEY DEVELOPED CANCER, HAD A SIGNIFICANTLY SHORTER SURVIVAL TIME.

THESE FINDINGS SUGGEST THAT THE STRESS OF LONELINESS MAY BE A RISK FACTOR FOR CANCER.