Stress as bodily response
STRESS-RELATED ILLNESS → IMMUNE SYSTEM
EVOLUTIONARY ORIGINS
BODY'S RESPONSE
ACUTE STRESS (IMMEDIATE)
CHRONIC STRESS
EVALUATION
LAZARUS (1992)
RELATIONSHIP S & I
HEALTH AFFECTED BY DIFF. FACTORS INCL. GENES LIFESTYLE
HEALTH Q. STABLE
SLOW CHANGE
HARD TO TELL
STRESSORS CAUSED CHANGE
L-T
CONT. MEASURES
OVERTIME
EXPENSIVE
IMPRACTICAL
MAINLY S-T RESEARCH.
NESSE & YOUNG (2000)
STRESS RESPONSE
USEFUL
COPE.
WALTER CANNON 'FIGHT OR FLIGHT'
PREPARE BODY
PHYSICAL ACTION
↑HR
↑GLUCOSE
↑MUSCLE TENSION
↑BLOOD CLOTTING.
SUITABLE FOR EARLY HUMANS
NOT 21ST CENTURY
DEFINITION
MISMATCH OF DEMANDS MADE UPON INDIVIDUAL AND ABILITY TO MEET THESE DEMANDS.
RANDOLPH SAYS MISMATCH BETWEEN WHAT WE DESIRE & WHAT WE HAVE
AROUSE ANS
WORKS e.g.
HBEAT ÷
SYMPATHETIC (SNS) AROUSES FIGHT
PARASYMPATHETIC RELAXES TO NORMAL
SYMPATHOMEDULLARY PATHWAY
MADE OF SAM SNS
SNS ACTIVATED BY
NEURONES VIRTUALLY EVERY ORGAN & GLAND
PREPARE RAPID ACTION
RESPONSES
↑HR
↑BLOOD PRESSURE
↑CARDIAC OUTPUT
↑RAPID SIZE
RELEASING NORADRENALINE (NEUROTRANSMITTER)
ADRENALINE RELEASE
ATTACKS WITH SAS ACTIVATION
THROUGH ADRENALINE RELEASE
SAM (SYMPATHOMED ADRENAL MEDULLA
SNS NEURONES TERM.
GLANDS
2 DISTINCT ZONES MEDULLA CORTEX
MEDULLA HORMONE TO BLOOD.
↑O2
↑GLUCOSE ETC
2 MINUTE PROCESS.
HYPOTHALAMUS
CRF
PITUITARY GLAND
ACTH
ADRENAL CORTEX
CORT
CORTICAL LEVELS STAYS HIGHER FOR LONGER
NEG FEEDBACK
(HYPOTHALAMIC) PITUITARY-ADRENAL SYST.
'STRESS SYSTEM'
CORTISOL CONTROLS OTHER HORMONES.
BODY HOMEOSTASIS. (CONTROL SYST.
HYPOTHALAMUS'S ROLE
THAN (SAM). TO ACHIEVE HOMEOSTASIS
PARAVENTRICULAR NUCLEUS (PVN)
ACTIVATE
PARASYMPATHETIC
ADRENOCORTICOTROPHIC HORMONE (ACTH)
RELEASES ADRENAL CORTEX
PITUITARY GLAND
PASSED TO HYPO.
TO PRODUCE CAUSES CRF
STRESS-CREATED EFFECTS CORTISOL
TRANSCRIPTION FACTOR
ACTH
CHEMICAL MESSENGER PRODUCES
INDIVIDUAL DIFFERENCE
TAYLOR (2000)
'FIGHT/FLIGHT' MEN
TEND & BEFRIEND WOMEN
HORMONE GENDER DIFF. WHY?
STRESS-RELATED ILLNESS. MORE LIKELY MEN
OXYTOCIN
IN MEN & WOMEN
ADRENALINE (MARKERS NON-ADRENALINE)
IF.
ETHICAL ISSUES
MAKE
EFFECTS AGING SEEGERSTROM & MILLER (2004)
GENDER/AGE
INDIVIDUAL DIFF.
MARITAL CONFLICT MORE ADVERSE WOMEN
KIECOLT-(88)
FUNCTION IMMUNE CELL
MOST STUDIES
KIECOLT-GLASER et al. (1984)
ACUTE IMMUNE CELL ↑
FISHER et al. (1972) BUT
APOLLO ASTRONAUTS COUNTS LYMPHOCYTE (IC) e.g.
CORTICO ICT?
SWEDEN UNEMPLOYMENT CHRONIC STRESSORS
ARNETZ et al. (1987)
↓LYMPHOCYTE
(1980)
MED STUDENTS).
NATURAL EXPERIMENT
KIECOLT-GLASER EXAM STRESS ACUTE
e.g. EXAMS ↓T STRESS
IMMUNE SYSTEM EFFECTED
BEFORE MONTH BLOOD SAMP
DUCING
NK CELL ALT. ↓
SUGGEST REDUCTION
IMMUNE.
TO HEAL LONGER 40% WOUNDS
IN HOLS. THAN
AFTER CONFLICT IN HUMANS HEAL SLOWER WOUNDS KIECOLT (2005) RELATIONSHIP CHRONIC (ONGOING)
SEPERATED HOMES KIECOLT (1988)
SEP. IN LAST YEAR. HOUSE IS
MARUCHA (1986)
12HR PERIOD. 90 NEWLY INFECTS. HALLADAY (1984)
FINANCE e.g. COMPLAINING ISSUES/ISSUES
EFFECTS ON IS?
ENHANCE IS?
EBWIN (1990)
UP-REG. S-T
DOWN-REG L-T.
MUCOUS COATS S/gA (ANTI-BODY)
LINGS STUMACH
ABSENCE INFECTION.
STRESSFULS TO OTHER STUDENTS
MILD STRESS
DURING EXAMS S/gA
SYST