

Historical Perspectives on the Development of Chelation Therapies

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Diplomate, American Board of Chelation Therapy



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

History

- discernment of **biases**
 - intrigue of **politics**
- crescendo of **achievement**
- deepest pit of **despair**



History

- our responsibility to the future:

more free, more able,
more aware

- people and the problems
they faced



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

History

is a

happening

thing!



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1893

Alfred Werner
proposed theory of
Metal-Ligand Binding
as a
ring formation



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1893

Alfred Werner
illustrated the
metal atom placed
at center of an
octahedron



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1913

Alfred Werner

received the Nobel Prize

for his discovery of

“complexion” chemistry

(metal-ligand complexes)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1920

Morgan and Drew
defined “chelation”
as a metal ion
incorporated into a
heterocyclic ring

(Journal of the Chemical Society [London])



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

mid -1930s

Franz Munz

first synthesized EDTA

(later called “Trilon-B”)

to substitute for citric acid

(process used ethylenediamine
with chloracetic acid)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1935

First patent for
EDTA

filed in Nazi Germany
(marketed as “Trilon-B”)

(salts of NTA -- nitrile triacetic acid --
were marketed as “Trilon-A”)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1930s

Frederick Berswerth
synthesized EDTA

(by a formaldehyde/cyanide process)

for American marketing

as “Versene”



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.



1941

Frederick Berswerth

filed first EDTA

patent application

for “Versene,”

finally granted in 1945



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

early 1940s

World War II search
for **antidotes** to nerve gases

Arsenic = nerve toxin
= metal

= affinity for -SH
groups

metal - (SH) - ligand = chelation



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1945

Peters, Stocken, and
Thompson

developed new chelator:

BAL

(Dimercaprol)

(Nature)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1945

BAL

B = British

A = Anti-

L = Lewisite

“Lewisite” = a heavy metal toxin



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1945

BAL

as the first drug treatment for
“heavy metal” exposures
marked beginning of the era:
chelation therapy



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1947

Martin Rubin
met Berswerth,
later explored EDTA for
calcium chelation
and anti-coagulation
(hematology “lavender-top tube”)

(Bulletin of the Georgetown University Medical Center)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1947

Charles Geschickter

was first physician to

administer (nickel)-EDTA

to a human being

(attempt to treat breast cancer)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1947

Walter Reed
Army Medical Center
physicians
gave EDTA as attempt to
dissolve kidney
and bladder stones



1950

Rubin and colleagues

showed that iv-EDTA

would **chelate plasma calcium**

leading to hypocalcemia and urinary
excretion of calcium-EDTA

(Proceedings of the Society for
Experimental Biology and Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

20

1951

Rubin and Martell
proposed using
magnesium-EDTA
to lower blood pressure
-- clinicians **not** interested



(Bulletin of the Georgetown University Medical Center)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1952

Rubin and colleagues

showed in vitro that

calcium-EDTA would
exchange with lead, forming
lead-EDTA

(Medical Annals, District of Columbia)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1952

S. P. Bessman

used calcium-EDTA to
successfully treat a child with
acute lead poisoning

(“Experts” said: “It’s *not* possible”)

(Medical Annals, District of Columbia)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

early 1950s

Elderly patients treated
with EDTA for **lead** poisoning
showed unexpected
dramatic improvements with
coexisting ASCVD



1950s

Exciting era for
basic science and clinical
research into the properties
of EDTA as a medical
treatment



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1950s

“Endrate” brand of EDTA,
marketed by Abbott, used in
medical treatment:

Na_2 -salt increases solubility
of the chelating agent



1952

Herta Spencer

first treated

hypercalcemia

with EDTA

(marketed by Abbott as “Endrate”)

(Journal of Clinical Investigation)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1950s

Norman E. Clarke, Sr.

did pioneering clinical
studies on EDTA chelation
for **ASCVD**

at Providence Hospital, Detroit, Michigan



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1950s - 1960s

Norman E. Clarke, Sr.
reported clinical findings
in **peer-reviewed** journals

“Father of EDTA Chelation Therapy
in America”



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1955

Norman E. Clarke, Sr.

with Clarke and Mosher

first published findings on
effectiveness of EDTA in
treatment of **ASCVD**

(American Journal of Medical Sciences)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1955

Use of EDTA for **ASCVD**
marked the acknowledged
beginning of chelation therapy
as a successful **cardiovascular**
intervention



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1955

Dudley and colleagues
first described unexpected
kidney tubule damage
from EDTA treatment

(New England Journal of Medicine)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1955

Denham Harman
first proposed theory of
free radical damage
as a key factor
in aging and illness

(U. S. Atomic Energy Commission)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1956

Clarke, Clarke, and
Mosher

published on 20 patients:
uniform improvement of
angina and EKG abnormalities



(American Journal of Medical Sciences)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1956

H. Foreman

reported **nephrotoxic** hazard
in humans treated with
high-dose EDTA
(and dose-response renal toxicity in rats)

(Journal of the American Medical Association)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1957

Denham Harman
explained atherosclerosis:

- (1) oxidative polymerization
of serum lipoproteins
- (2) anchoring oxidized material
- (3) inflammatory reactions

(Journal of Gerontology)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.



1957

Gubner and Kallman described EDTA treatment of digitalis toxicity

(although credit is usually given to **Surawicz**, who
in **1959 - 1961** treated digitalis toxicity
along with relief of cardiac arrhythmias)

(**American Journal of Medical Sciences**)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

late 1950s

Fertile years for discovery of
mechanisms and
toxicity of EDTA ...



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

late 1950s

Boyle -- reversal ASCVD

Perry -- B₆ deficiency,
urinary loss of zinc

Vogt and Cottier -- necrotizing
nephrosis



late 1950s

Moeschlin -- nephrosis

Perry -- urinary loss of
trace minerals

Cohen, Spritz, Lubash, and

Rubin -- arrhythmias



1959

Marvin Seven

hosted first symposium on
“Metal-Binding in Medicine”

at

Hahnemann Medical College

(Philadelphia, Pennsylvania)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1960

Marvin Seven

hosted **second** symposium

... then **died in 1961**

in car accident ...

chelation lost



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1960s

H. Ray Evers

continued extensive EDTA
clinical treatment programs:

“Every ASCVD patient
deserves a

therapeutic trial”



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1960

Clarke and Mosher

reported on 283 patients treated
for **ASCVD** over prior 4 years
with **87% improving**

(American Journal of Cardiology)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1960

Meltzer, Ural, and Kitchell

reported on EDTA in 10 men
with CAD/angina:
delayed improvements in 90%,
no significant toxicity



(in *Metal-Binding in Medicine*)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1961

Meltzer, Kitchell, and Palmon

published comprehensive
clinical **toxicology** of EDTA
in 81 patients with CAD over 2 years:

“Used without danger”

(American Journal of Medical Sciences)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.



1961

Catsch

reviewed various chelating agents
against various
radioactive metals

(Federation Proceedings)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1962

L. W. Wilder and
colleagues

showed arterial calcium released
by EDTA perfused over plaque
was proportional to degree of
atherosclerosis present

(Surgery)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1963

H. Foreman

described toxic side effects
of EDTA administration,
including hypoglycemia

(confirmed by Meltzer, Palmon, and Kitchell in 1961
and by Lamar in 1964)

(Journal of Chronic Diseases)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1963

Kitchell, Palmon, Aytan,
and Meltzer

“Reappraisal” of 1961 study:
“EDTA chelation is **not**
a useful clinical tool”

(American Journal of Cardiology)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

50

1963

Kitchell and Meltzer

reached their conclusions despite
only 32% of were dead of CAD
and 40% remained clinically better
out of 38 patients treated

(American Journal of Cardiology)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1964

Albert Soffer

edited monograph,

Chelation Therapy,

describing benefits of

EDTA in **ASCVD**



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1964

Carlos Lamar

coined term

“chemical endarterectomy”
and published on vascular
improvements in 15 **diabetics**

(Angiology and
Journal of American Geriatric Society)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

late 1960s

Renewed research into
EDTA mechanisms ...

Wartman -- plaque reversal

Doolan and Schwartz --
pinocytosis in kidney



late 1960s

Boyle and McCann --
parathyroid hormone

Olwin and Koppel --
lower plasma lipids

Langhof -- lower cholesterol



1969

Abbott's **patent expired**
on EDTA, leaving it an
“orphan drug”
-- the **final blow** to
American chelation research



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

56

1969

Three major blows to acceptance

of EDTA chelation for ASCVD:

- accidental **death** of Dr. Marvin **Seven** in 1961
- **Kitchell and Melzer's "reappraisal"** in 1963
- **expiration** of Abbott's **patent** in 1969



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1973

Harry Demopoulos

published on

free radicals

in **vascular** pathology

(Federation Proceedings)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1973

AAMP

American Academy of
Medical Preventics

-- Harold Harper
was first president



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1976

W. A. Pryor

edited a series

of several volumes:

Free Radicals in Biology



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

60

1976

Garry Gordon and
Robert Vance

published extensively referenced article
on **history and mechanisms**
of EDTA chelation

(Osteopathic Annals)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1976

Tamburino and colleagues
reported **osteoporosis** is
reversed by EDTA, where PTH
increases osteoblastic activity

(IRCS Medical Science Library Compendium)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1977

Peng and colleagues
showed EDTA improves
mitochondrial energy
production in ischemic
myocardium



(Journal of Molecular and Chemical Cardiology)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1978

H. Ray Evers

won on federal court appeal:

“Physician may **vary the conditions of drug use** from those approved on insert”



1979

Hollander and
colleagues

reported **reduction** of aortic
atheromatous lesions
in EHDP-chelated rabbits

(Atherosclerosis)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.



1979

Bruce Halstead

published monograph,

*The Scientific Basis of
EDTA Chelation Therapy:*

“significant improvements”



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1980

Blumer and Reich

showed EDTA

reduced cancer *incidence*

by 90% in 59 patients

over *10* years

(Environmental International)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.



1980

Walker

showed EDTA
removes calcium from
arteriosclerotic plaque
in rabbits

(Ph.D. thesis, Texas State University)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1980

J. Bjorksten

published theories on
life extension potential
of EDTA chelation therapy

(Rejuvenation)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1980

Robert Rogers

won “right to practice EDTA
chelation therapy for
cardiovascular diseases”

-- Florida Supreme Court



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

early 1980s

H. Richard Casdorph

published key studies on
effectiveness of EDTA in

CAD, cerebrovascular, and
peripheral arterial disease



(Journal of Holistic Medicine 1981, 1983)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1980s - early 1990s

McDonagh, Rudolph,
Cheraskin, and colleagues
published a long series of
EDTA clinical studies
documenting improvements



1980s - early 1990s

McDonagh, Rudolph, and Cheraskin showed improvements with HDL lipoproteins, blood cholesterol, arterial stenosis, creatinine, BUN, fasting serum calcium, glycohemoglobin, fatigue, heart rate, systolic BP, “clinical change,” vascular dynamics, bone density



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1982

Porter, Cutler, and
colleagues

reported 24% increase in
claudicatory walking distance

..... with drug Trental
(pentoxifylline)



(American Heart Journal)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1983

AMA offered **DATTA**
assessment of EDTA:

“Has **not** been established
as an **acceptable** treatment
for CAD or other ASCVD”

(Journal of American Medical Association)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1983

ABCT

American Board of
Chelation Therapy

-- Charles Farr
was first chair



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1983

GLACM

Great Lakes Association
of Clinical Medicine

-- Jack Slingluff
was first president



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1983

ISCT

International Society of
Chelation Technicians

-- **Robert White**

was first executive director



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1984

Elmer Cranton and
James Frackelton

published definitive review:

“Free Radical Pathology in
Age-Associated Diseases”



(Journal of Holistic Medicine)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1985

A. Zechmeister

demonstrated in mini-pigs

arterial calcification patterns:

“macro” in cerebral

“macro + micro” in coronary

“micro” in peripheral

(Czechoslovakia)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1986

FDA granted an IND

(Investigational New Drug)

application authorizing the

study of **EDTA**

chelation therapy

in **peripheral** ASCVD

(#128.847)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1986

AAMP

changed its name to

ACAM

American College for
Advancement in Medicine

(DIAL 1-800-LEAD-OUT)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1987

IBOM

International Bio-Oxidative
Medicine Foundation

-- Charles Farr
was first chair



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1988

Olszewer and Carter
published on 2,870 patients:
77% markedly better with CAD,
91% markedly better with
peripheral ASCVD

(Medical Hypothesis)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1988

JAM

Journal of
Advancement in Medicine

first published by ACAM

-- Elmer Cranton
was first editor



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1988

Deucher

published observations on
EDTA as **antioxidant strategy:**
good to excellent results in
91% of patients

(Journal of Advancement in Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1989

Cranton

edited a special edition of
Journal of Advancement in Medicine
detailing safe and effective
administration of EDTA



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1989

Cranton and Frackelton
reviewed current status of
EDTA chelation in ASCVD:
safe and effective,
less expensive than bypass

(Journal of Advancement in Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1989

Blumer and Reich

showed EDTA

reduced cancer *deaths*

by 90% in 59 patients

over 18 years

(Journal of Advancement in Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1989

IRB

(Institutional Review Board)

founded by GLACM

-- L. Terry Chappell

was first chair



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1990

Olszewer, Sabbag,
and Carter

published first double-blind,
placebo-controlled EDTA study
in peer-reviewed journal

(Journal of the National Medical Association)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1990

Olszewer, Sabbag, and
Carter:

10 patients with claudication,
5 walked significantly better
after 10 treatments (of 1.5 g EDTA)
so code broken and all 10 then
showed improvements with EDTA

(Journal of the National Medical Association)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1990

Robert Rowen

persuaded Alaska State
Legislature to pass first law:

“freedom of choice
in health care”



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1991

Sloth-Nielsen, Guldager,

and Danish *surgical* colleagues

were **first ever** to claim to find

NO improvements

in so-called “double-blind” study
of **peripheral** ASCVD

(American Journal of Surgery)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1991

Sloth-Nielsen and Guldager

studied 53 patients with **peripheral** ASCVD

over 50% of treated patients
showed improvements --
“placebo” patients did, too

(American Journal of Surgery)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1991

Rudolph, McDonagh, and Barber

published Doppler results
in 30 patients with **carotid** artery
stenosis, 30 treatments each:

21% plaque reduction



(Journal of Advancement in Medicine)
John Parks Trowbridge M. D.

1990 - 1992

FDA **IND-study** of EDTA

in peripheral ASCVD

ground to a halt as U. S. Army

medical personnel were

transferred to Operation

Desert Storm



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1992

Guldager

and Danish *surgical* colleagues

claimed to find

NO improvements

in further report of “double-blind”

study of **peripheral** ASCVD

(Journal of Internal Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1992

Salonen and colleagues

studied 1,931 asymptomatic

Finnish men for 3 years:

iron (as *ferritin*) showed

increasing risk for MI

(Circulation)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1992

Salonen and colleagues
demonstrated that *ferritin*
is **second** strongest risk
factor for **myocardial infarct**,
following cigarette pack-years

(Circulation)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

100

1992

APMA

American Preventive
Medical Association

-- **Alexander Schauss**
was first executive director



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

101

1993

Chappell and Stahl
published **meta-analysis** of
19 studies -- 22,765 patients
with **vascular** disease:

87% improved

(0.88 correlation coefficient)

(Journal of Advancement in Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1993

Hancke and Flytlie

published Danish *medical* study
of pre-surgery patients:

58 of 65 cancel planned CABG,
24 of 27 limbs saved

(Journal of Advancement in Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1993

IRB

(Institutional Review Board)

founded by ACAM

-- Stephen Elsassser

was first chair



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

104

1994

van Rij and colleagues
in New Zealand study claimed
NO changes in 15 patients
treated in double-blind,
“placebo-controlled”
peripheral ASCVD study

(Circulation)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1994

Rubin, Rozema,
Casdorff, and Scarchilli
presented ultrafast CT scans in
2 patients showing EDTA
decreased
coronary artery calcification

(American Chemical Society)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1994

Denham Harman

reviewed functional life span:

“Aging is accumulation of
free radical changes ...

life span is determined by
rate of damage”

(Age)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1995

Escobar and colleagues
noted **marked** improvement in
76 of 80 patients treated
with EDTA for **peripheral**
ASCVD



(Surgery and Surgeons)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1996

Philip Hoekstra III
submitted results of
tele-thermography in
19,147 EDTA patients with
peripheral ASCVD showing
86% improved

(pre-publication)



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.

1996

Chappell and Janson
reported on history and
current status of
EDTA treatment in
vascular disease

(Journal of Cardiovascular Nursing)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1996

Michael Schachter

published overview,
history, and status of
EDTA treatment
for atherosclerosis

(Journal of Advancement in Medicine)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.



1996

Olszewer, Sabbag, and Carter

reported Brazilian experience
with 100,000+ patients and
small prospective studies showing
minimal side effects

(Townsend Letter)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1996

Martin Rubin

published “Magnesium
EDTA Chelation”

chapter in Messerli’s

Cardiovascular Drug Therapy

(second edition)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1996

GLACM

changed its name to

GLCCM

Great Lakes College
of Clinical Medicine



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1997

L. Terry Chappell

authored a **chapter** on
EDTA Chelation Therapy
for Cardiovascular Diseases
in upcoming **textbook** on
alternative therapies



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

1997

Bruce Halstead and Ted
Rozema

published updated edition of monograph,

The Scientific Basis of

EDTA Chelation Therapy:

still significant improvements



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

2000

GLCCM

changed its name to

ICIM

International College
of Integrative Medicine



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

2002

National Institutes of Health

announced \$35 million

for 5-year multi-center

TACT study of chelation

for **coronary artery disease**



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

2002

Knudtson, Wyse, et al.

Alberta, Canada found

no change

with chelation for ischemic
coronary disease

ignored the obvious

(JAMA)



LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

2003

Lin, Lin-Tan et al.

reported chelation improves
progressive **renal insufficiency**
that is otherwise accelerated
by **low-level lead** exposure



(NEJM)

LIFE CELEBRATING HEALTH

John Parks Trowbridge M. D.

120

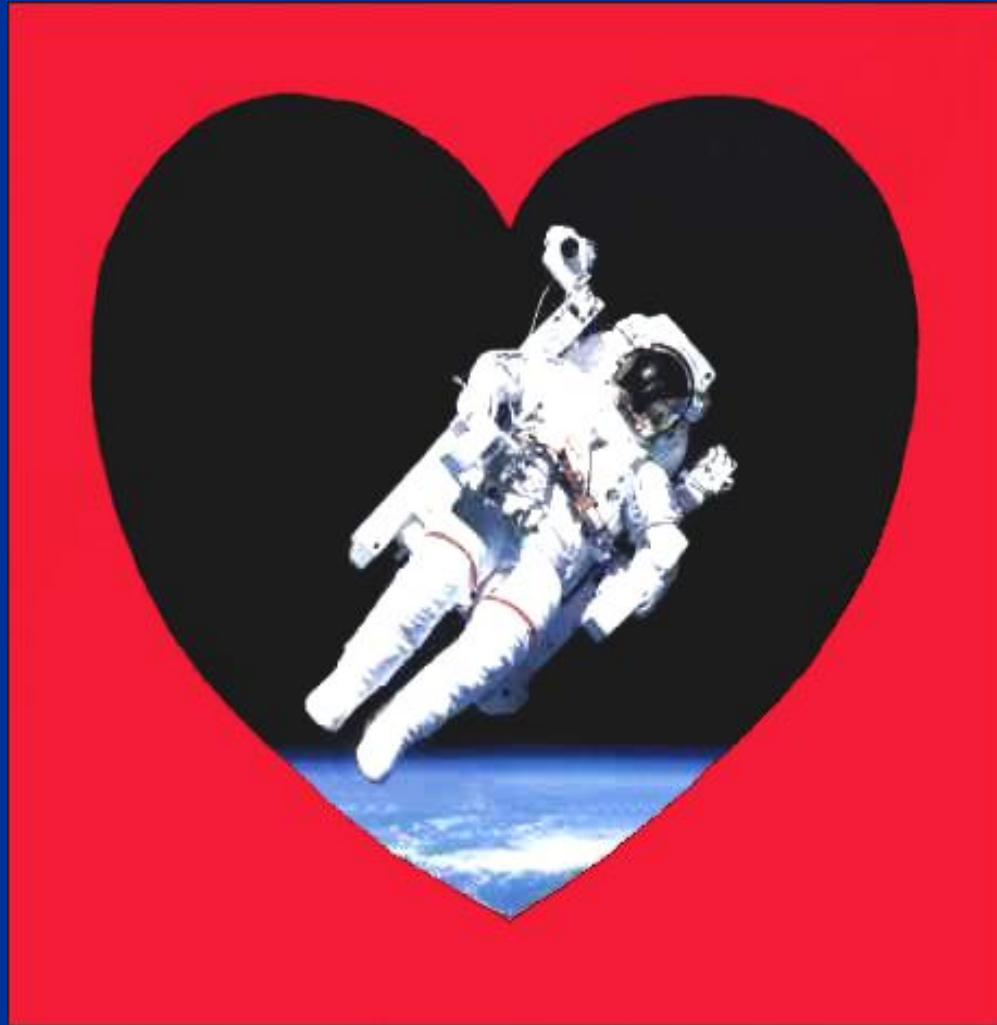
Today and beyond

Look around you ...

Tomorrow's history
is being **made today**
by people you're looking at
right now ...



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.



LIFE CELEBRATING HEALTH
John Parks Trowbridge M. D.