

DETOX

Endocrine Disrupting Compounds (EDCs) & Proteolytic Enzymes

Milton Bastidas, DC, CIHP

DETOX

Learning Objectives:

- Brief description of EDCs and how we encounter them
- Pathophysiology of EDCs as they interact with our cells
- Why use Proteolytic enzymes for detox
- Review Transformation's Detox study
- Learn how to apply Proteolytic enzymes in cases where EDCs are suspected

DETOX

According to NIEHS

Four points about endocrine disruption

- Low dose matters
- Wide range of health effects
- Persistence of biological effects
- Ubiquitous exposure

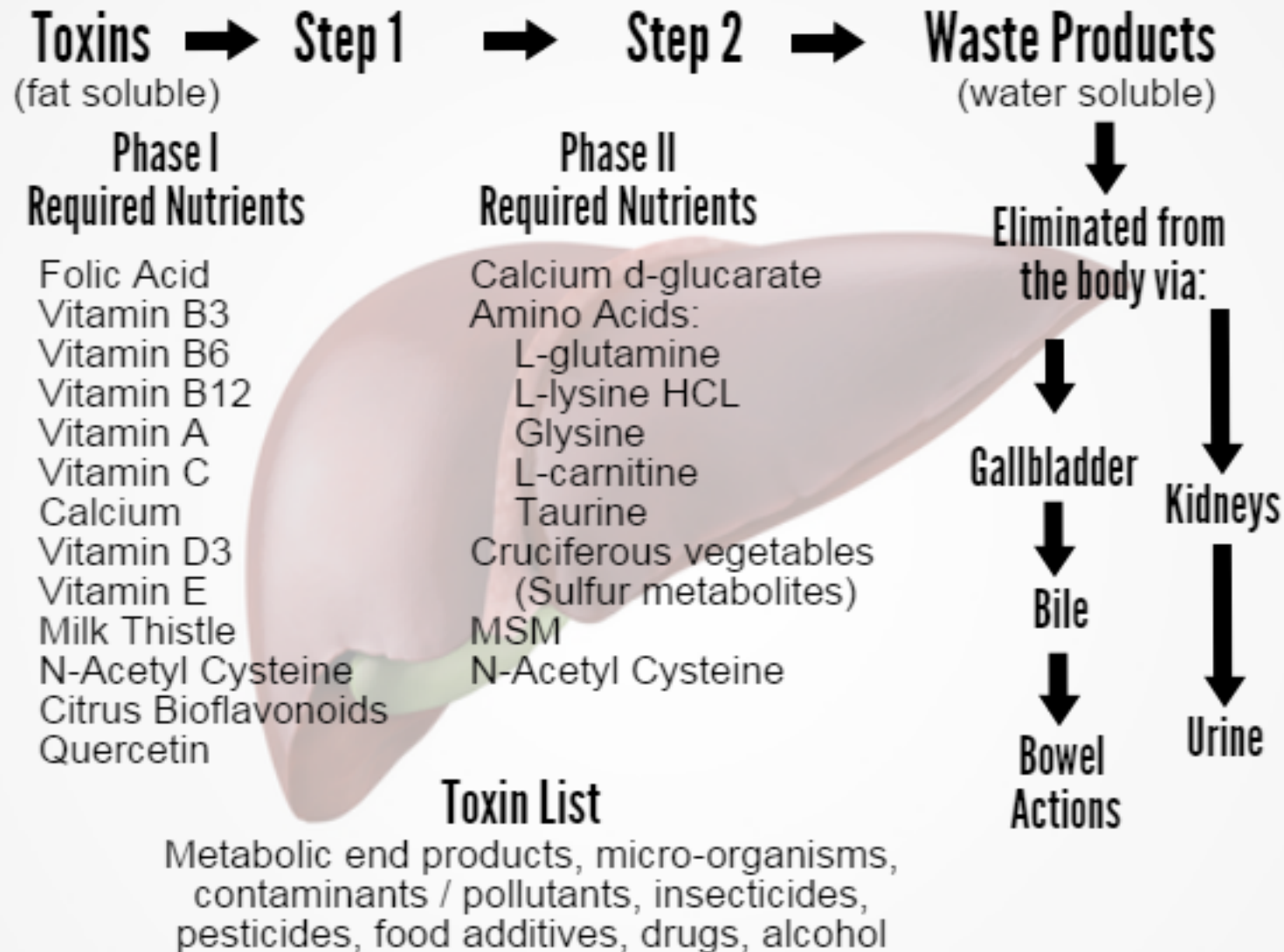
DETOX

What are the major sources of xenobiotics?

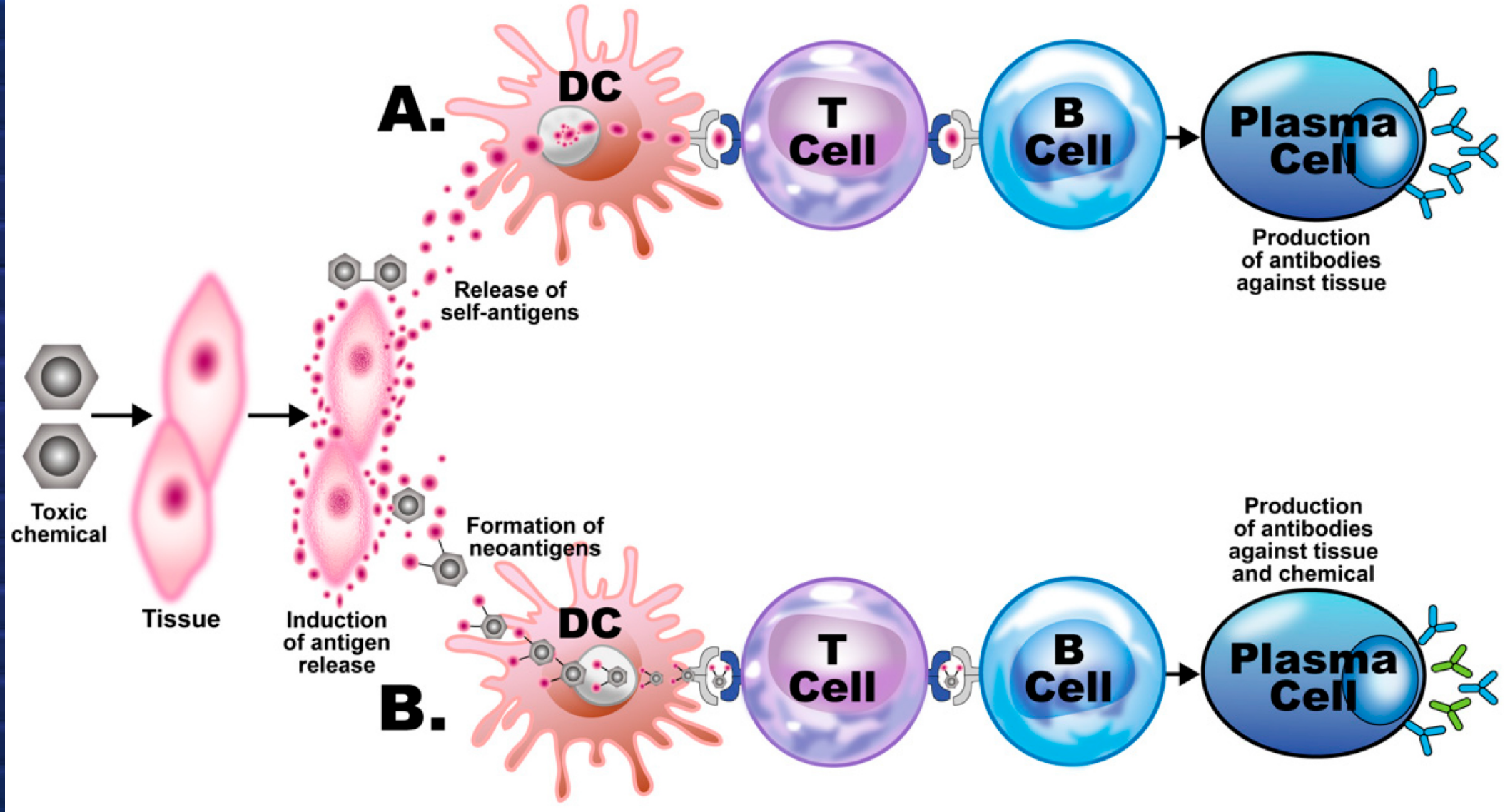
- Some authors suggest that we are burdened by as many as 100,000 man-made xenobiotics— and that doesn't take into account the natural ones.
- The major sources of xenobiotics are food additives such as colourings, flavours, preservatives, etc.
- The other sources are fungicides, pesticides, herbicides, antibiotic or hormone residues, various other drugs and environmental pollutants such as smoke produced by automobiles, brick-kilns, industries, crackers and fireworks used on Diwali and other festive occasions.

DETOX

Liver Phases



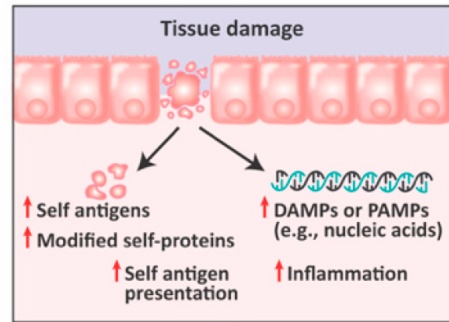
DETOX



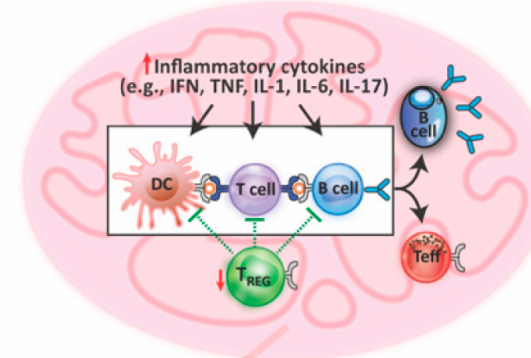
DETOX

Solvents, pesticides, herbicides, metals, silica, smoke

1. Amplified innate immunity



2. Amplified adaptive immunity



Production of autoantibodies against

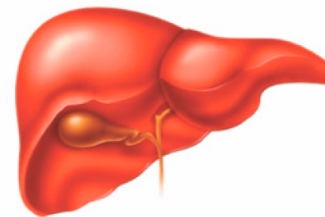
JOINTS



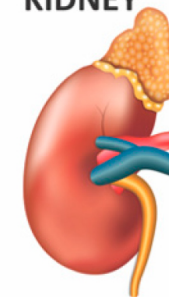
BRAIN



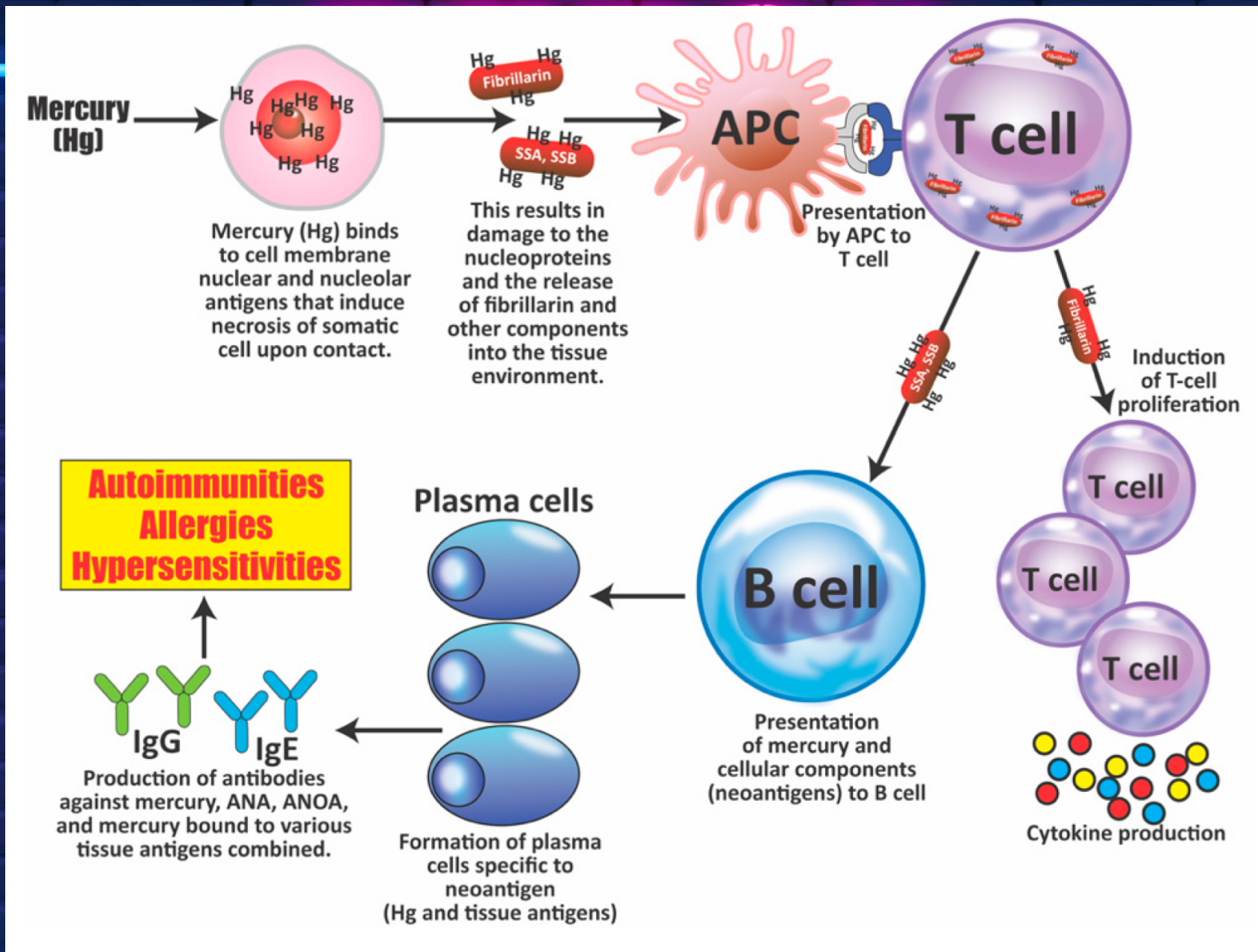
LIVER



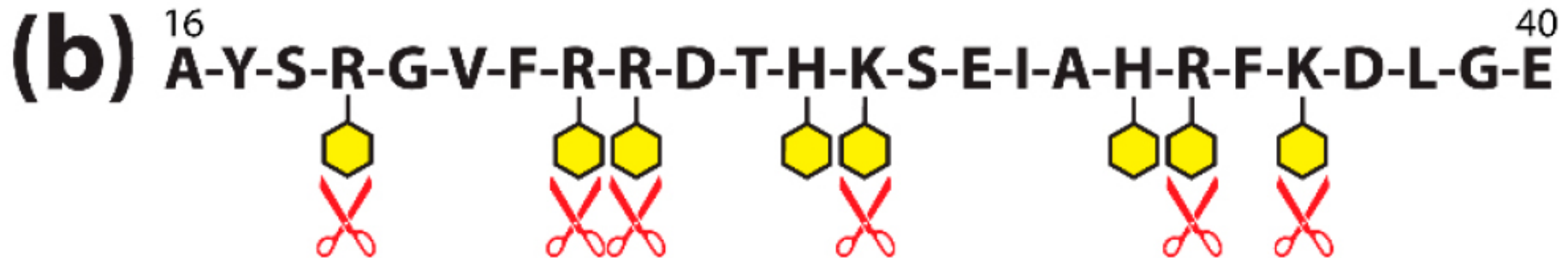
KIDNEY



AUTOIMMUNE DISEASES



DETOX



Amino acid sequence of albumin peptide before (a) and after (b) food colorant binds to different amino acids contained in the chain. (a) Trypsin (symbolized by red scissors) is shown cleaving the amino acid chain of a 16–40 sequence of albumin; (b) colorants (symbolized by yellow hexagons) bind to the major amino acids arginine (R), histidine (H), and lysine (K) present in the albumin sequence, making it difficult for the trypsin to cleave the sequence, and decreasing digestive effectivity.

DETOX

How can we get rid of xenobiotics?

- The body gets rid of xenobiotics by xenobiotic metabolism.
- This consists of the deactivation and the secretion of xenobiotics, and happens mostly at the liver.
- Secretion routes are urine, feces, breath and sweat.
- An example of a group of enzymes involved in xenobiotic metabolism is the hepatic microsomal cytochrome P450s.
- Because of the significant overload of xenobiotics in our modern environment, we should undertake a light detoxification program.
- However, learning the sources of xenobiotics and how to avoid them is even more important.

DETOX

Here are some useful suggestions:

- Avoid all artificial colors, flavors, preservatives, and sweeteners.
- Eat low on the food chain. The closer a food is to its natural state, the less the toxin risk.
- Eat organically grown food as much as possible.
- Carefully select body care products, avoiding petroleum-based cosmetics and body care products.
- Avoid using chemical-based household cleaners, laundry products, and air fresheners. Buy toxin-free, biodegradable products made with natural ingredients.
- Drink spring or filtered water.
- Fill your home and work environments with houseplants that absorb toxic gases from the air. Spider plants, Boston ferns, English ivy and Dracaena are easy to grow and provide natural air pollution control.

DETOX

THE DETOX STUDY

ENZYMES + HEALTHY DETOXIFICATION

New Research



DETOX

Objectives

- Investigate the role of diet, lifestyle, and proteolytic enzymes in detoxifying the body from EDCs
- Protease group (4 caps 3xday) on Thrive diet vs Placebo control group on Thrive diet
- Three kinds of pre- and post- testing: inflammatory markers (LabCorp), environmental toxins (Vibrant Wellness), and immune reactivity (Cyrex)
- Focus on agricultural toxins (pesticides, herbicides, etc) along with industrial and commercial chemicals (plastics, cosmetics, cleaning products, etc)
- Pre- and post- symptom survey
- Weekly questionnaires

DETOX

Inflammatory Markers

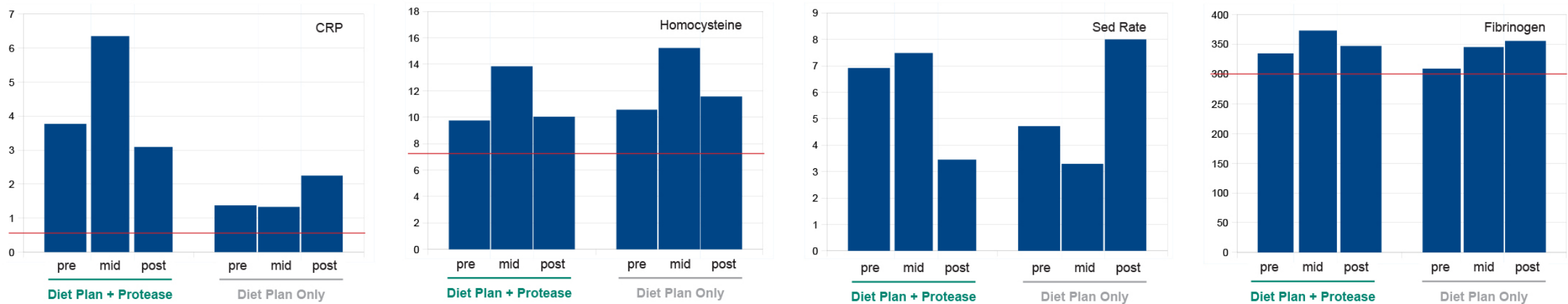


Figure 1 (A,B,C,D). Relative comparison of blood markers between Protease group and control group

DETOX

CHART REVIEW SPOTLIGHT | RED-LINE RANGES

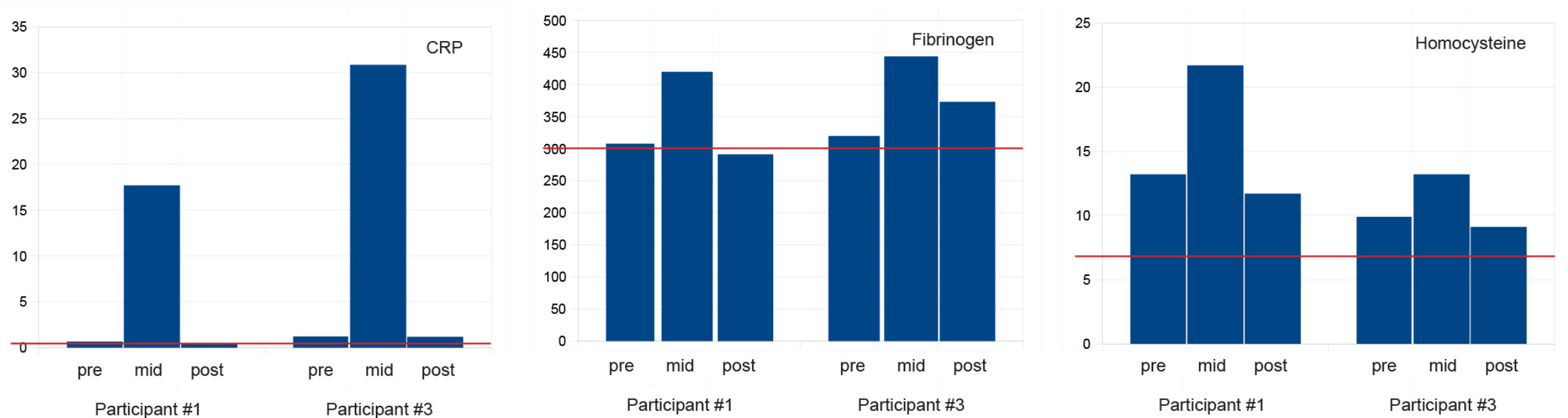


Figure 2 (A,B,C). Spotlight: blood panel markers for two selected participants

DETOX

Environmental Toxins

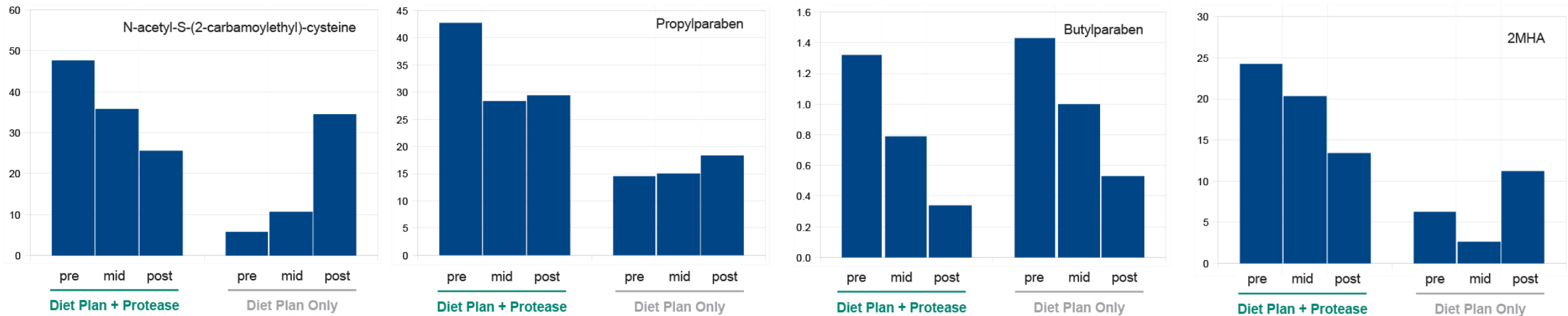


Figure 3 (A,B,C,D). Acrylamide (N-acetyl-S)), paraben (Propylparaben, Butylparaben), and xylene (2MHA) toxicity

DETOX

Environmental Toxins

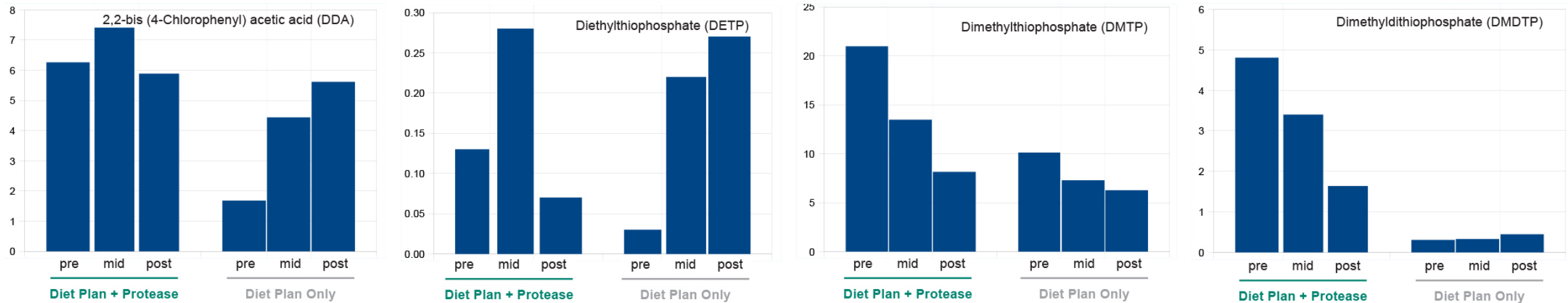


Figure 4 (A,B,C,D). Organochlorine (DDA) and organophosphate (DETP, DMTP, DMDTP) pesticides in urine

DETOX

Environmental Toxins

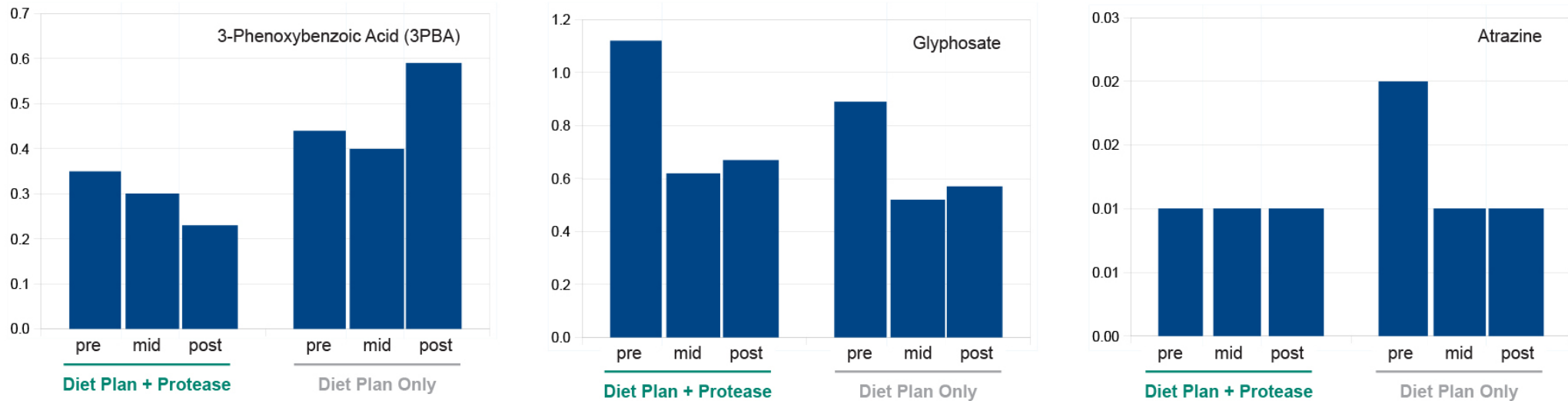


Figure 5 (A,B,C). Pyrethroid pesticide (3PBA) and Herbicides (Glyphosate, Atrazine) in urine

DETOX

Environmental Toxins

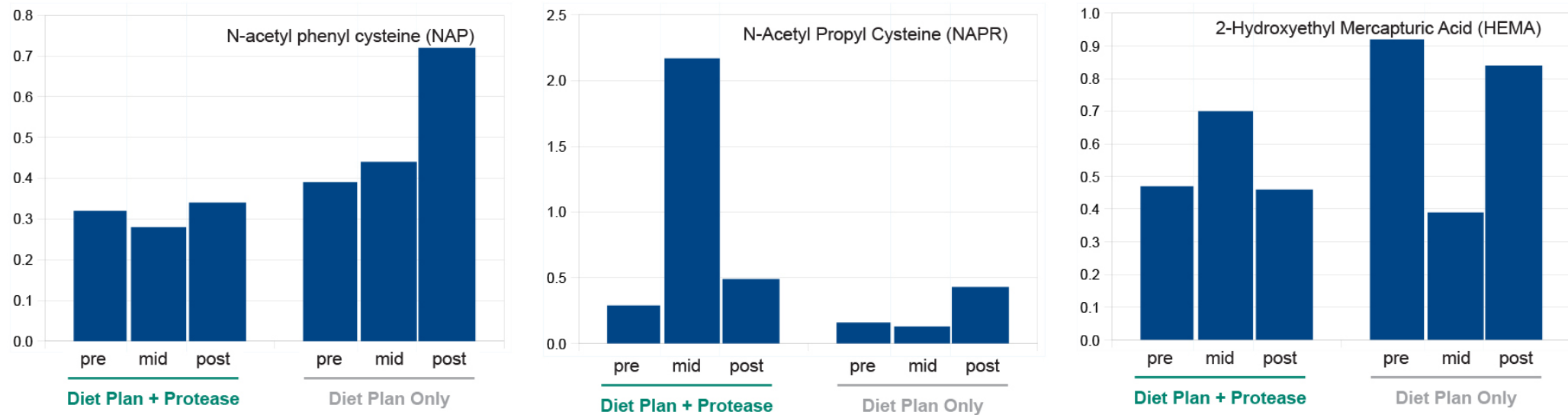


Figure 6 (A,B,C). Benzene (NAP), Bromopropane (NAPR), and Ethylene Oxide (HEMA) in urine

DETOX

Environmental Toxins

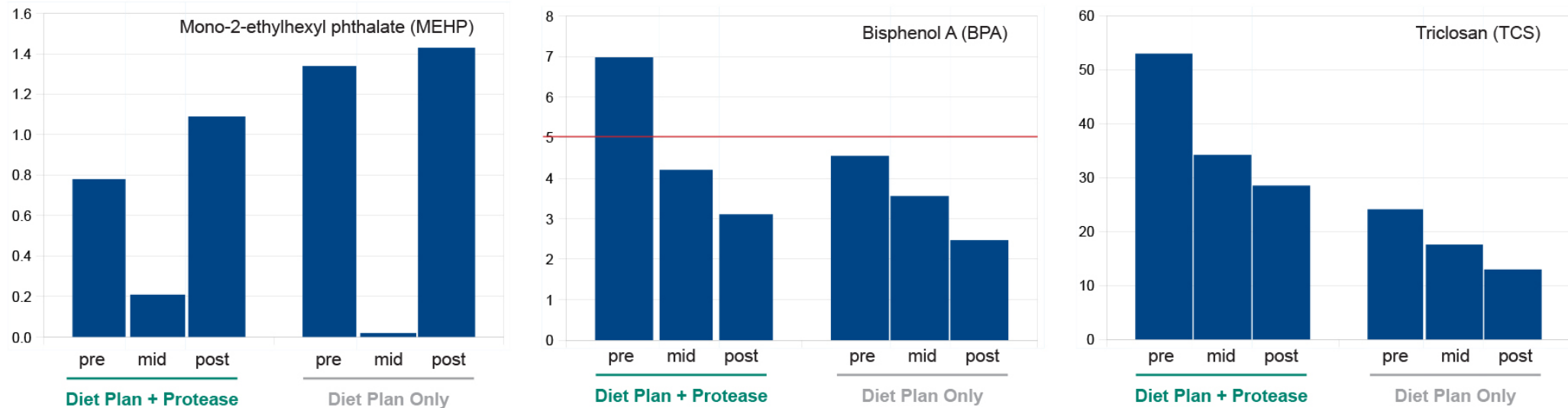


Figure 7 (A,B,C). Phthalates (MEHP) and Environmental Phenols (BPA, TCS) in urine

DETOX

CHART REVIEW SPOTLIGHT | GASOLINE POISONING

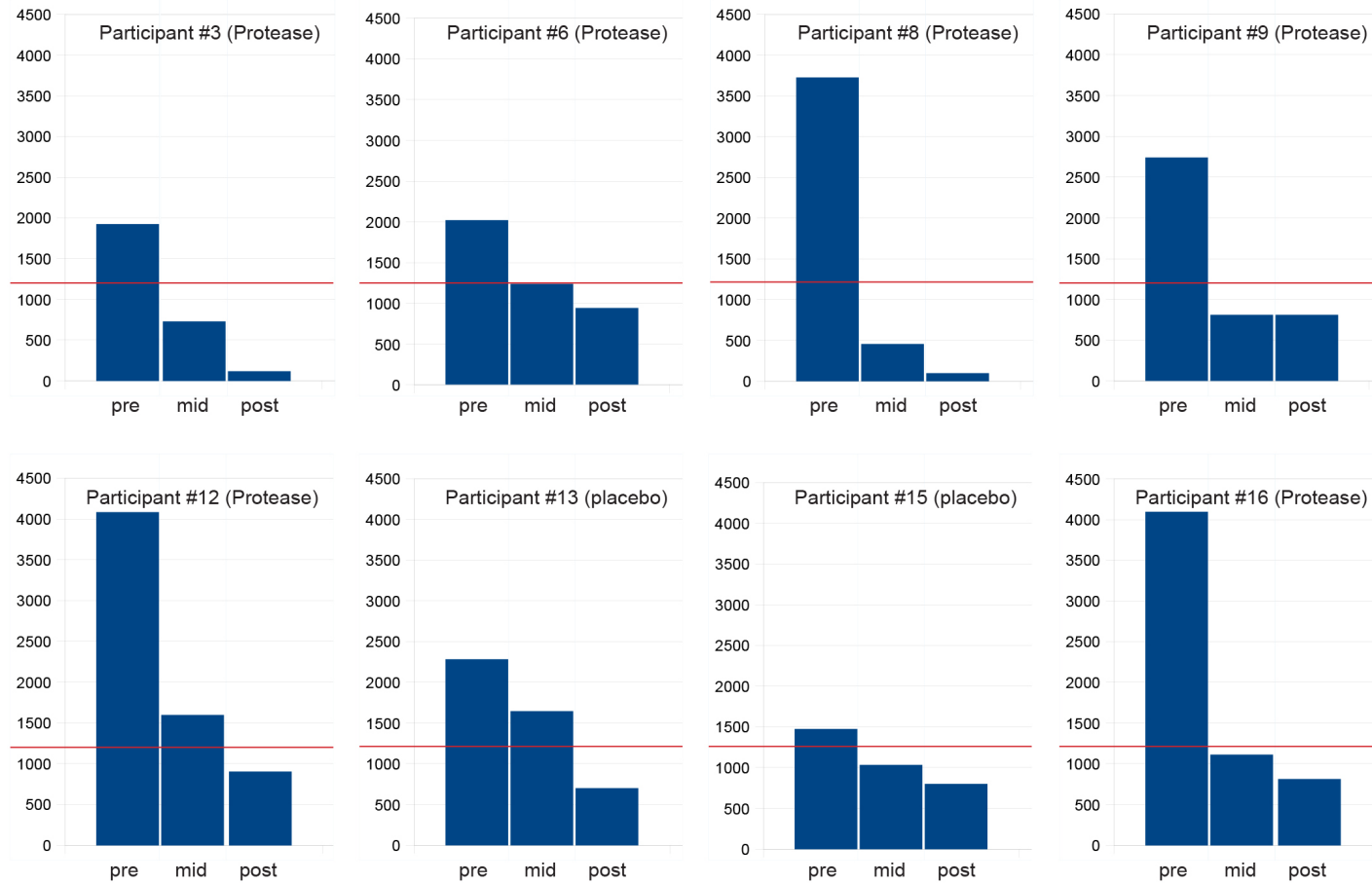


Figure 8 (A,B,C,D,E,F,G,H). Baseline out-of-range 2HIB scores

DETOX

CHART REVIEW SPOTLIGHT | COMMERCIAL TOXINS

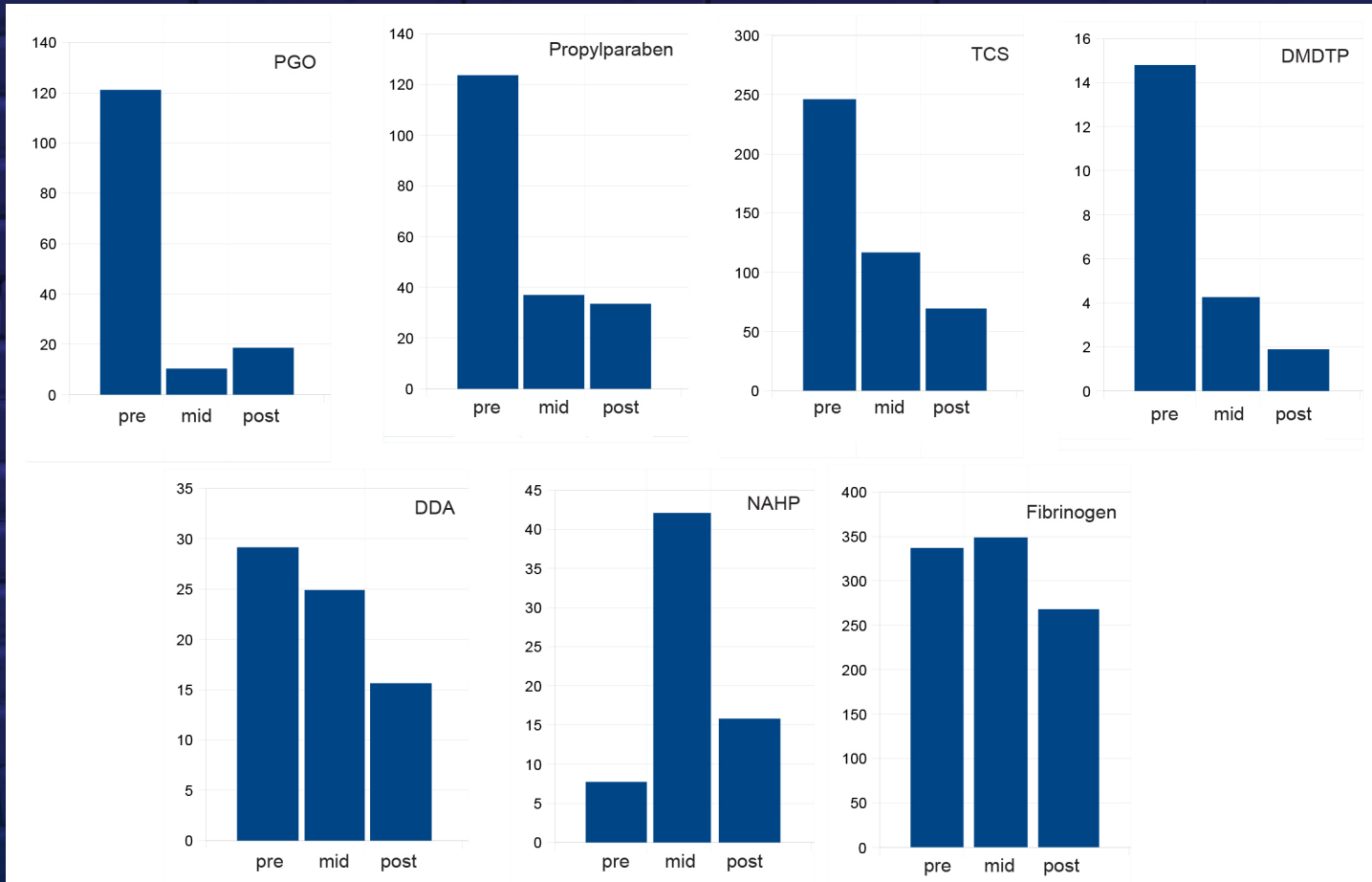


Figure 9 (A,B,C,D,E,F,G). Baseline out-of-range 2HIB scores

DETOX

CHART REVIEW SPOTLIGHT | EVERYDAY TOXICITY

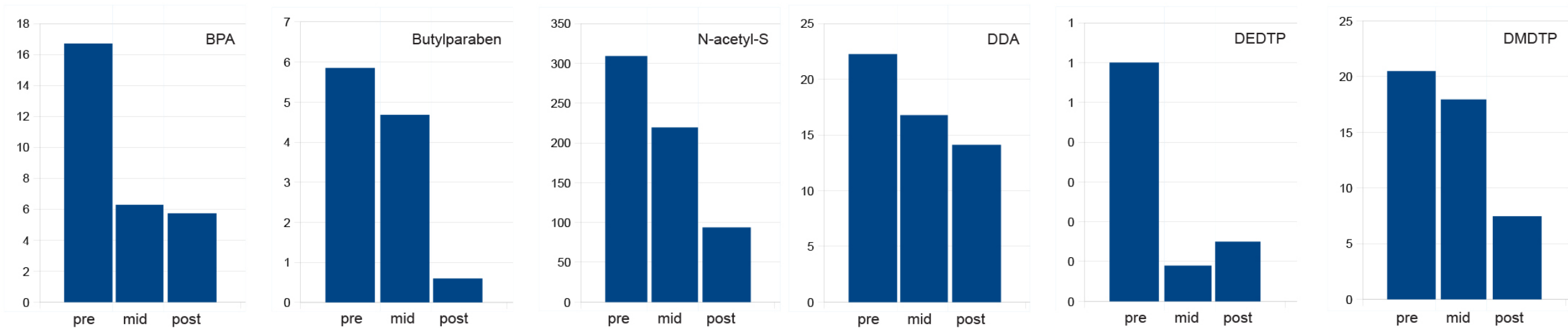


Figure 10 (A,B,C,D,E,F). Selected charts for Participant #4 in the Protease group

DETOX

Chemical Immune Reactivity Screen

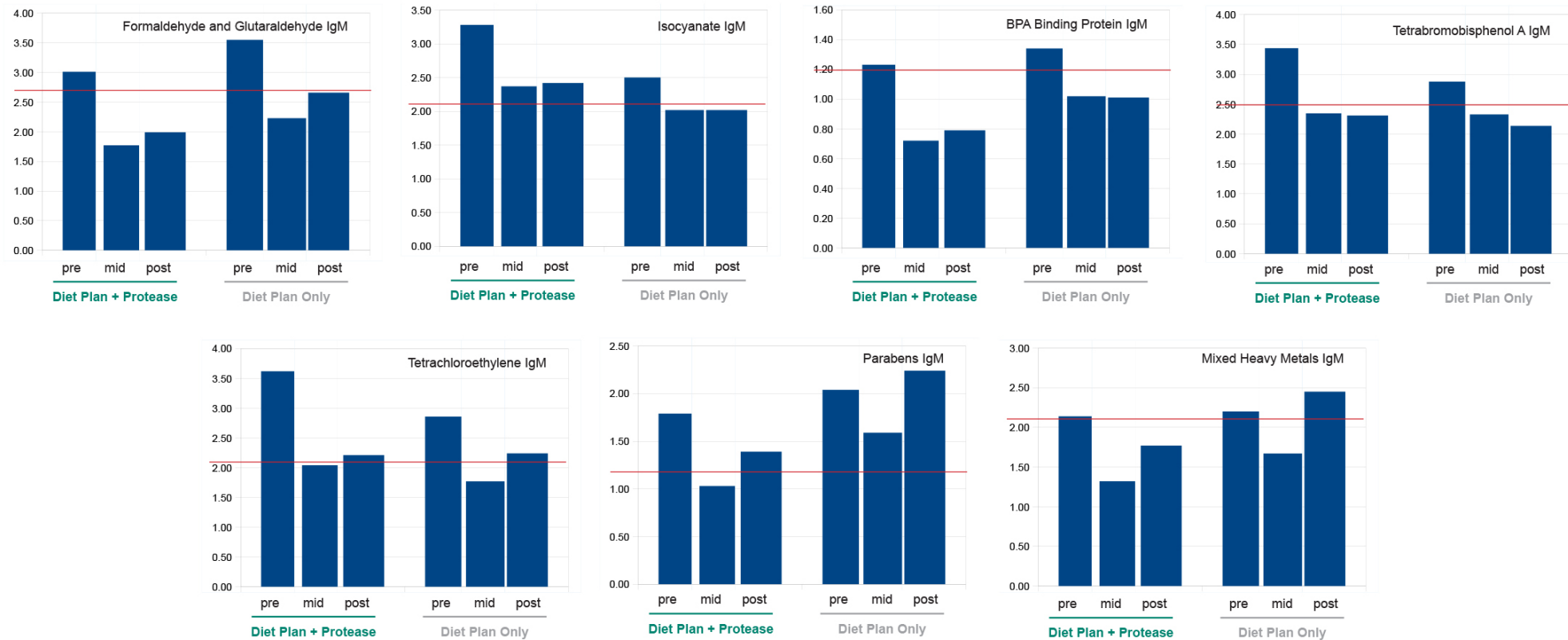
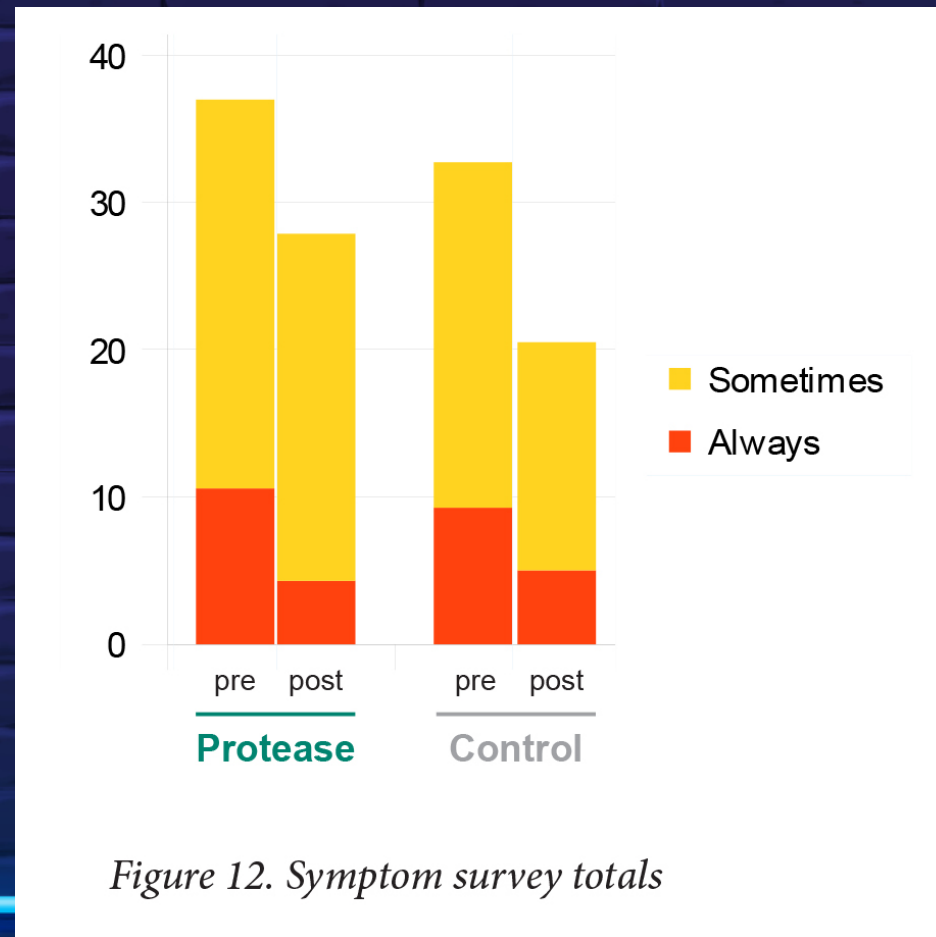


Figure 11 (A,B,C,D,E,F,G). Selected IgM antigen tests

DETOX

Symptom Surveys



DETOX

Feedback from Participants

WEEK 1

- “I love caffeine, not having it has been difficult. I miss some processed foods. Somewhat hard, but I can start seeing some good differences. I breathe a lot better, I am not using one of my inhalers, and I have lost about 4 lbs.”
- “Cutting out bread, cheese and specifically rice has been very difficult.”
- “The first two days were rough, but now my energy is getting more steady. I used to have one bowel movement per day, now I’m having 2-4. I’ve had a number of people tell me I have lost weight and look thinner.”

DETOX

Feedback from Participants

WEEK 2

- “Increased energy, less joint pain, slight weight loss.”
- “Craving coffee and fries and some sweets. But I am losing weight and looking good. And my face is glowing.”
- “The fact that my energy is good and I feel pretty good with all I have going on is pretty amazing.”

DETOX

Feedback from Participants

WEEK 3

- “I’ve lost some inches and my tummy and face look slimmer, that is motivating me to keep on track even more.”
- “Clearer skin, flatter tummy.”
- “I have lost 5-8 pounds so far.”
- “Just feeling good.”
- “Energy is better throughout the day.”

DETOX

Feedback from Participants

WEEK 4

- “Afternoon energy seems to be improving. “
- “I’ve lost over 9 pounds. Even though I haven’t lost a ton of weight, people are commenting that it looks like a lot. My knee pain has greatly reduced and I no longer feel buildup on my back teeth like I did before the study when even after brushing my teeth, it always felt filmy.”
- “Yesterday I noticed I think my skin did look pretty good and I got two compliments today which was random.”

DETOX

Feedback from Participants

WEEK 5

- “Feeling lighter.”
- “No joint pain, more energy, better sleep, better focus.”
- “I sleep well and dream almost every night.”

DETOX

Feedback from Participants

WEEK 6

- “More energy, less upset stomach.”
- “My face is clear with no pimples, my clothes are big on me, and my tummy is slimming down.”
- “My skin looks better, I’m thinner, my eyebrows are returning on the ends which makes me think my thyroid is functioning better. People keep telling me I look younger which is nice!”

DETOX

Feedback from Participants

WEEK 7

- “Loss of 8 lbs to date.”
- “More comfortable during the day, bowel movements increased, sleeping better, energy is good.”
- “My gut is now more comfortable throughout the day. When I am home and in my element I am eating clean and healthy. I am feeling good, no pain in my joints, my waist is slimming down.”

DETOX

Feedback from Participants

WEEK 8

- “Feeling better overall, off my antidepressant, started thyroid, won't be returning to my old ways.”
- “My face is clear and my skin is glowing. My clothes are fitting me well.”
- “Skin looks healthier, hair is healthier. Not too awkward to turn away foods like cookies, coffee, etc. People expect me to eat healthy now which I like!”

DETOX

Feedback from Participants

WEEK 9

- “Bowel movements are about 2x per day now, sometimes up to 4x if I have a lot of green smoothies.”

WEEK 10

- “Very comfortable gut, good sleep, good energy throughout the day, also my joints (knees) are better, not as stiff and can run longer.”

etc...

DETOX

Thank You!

- Suzanne Espinoza | Transformation Enzyme Corporation
- Mahamane Mamadou, PhD | Phytomedic Labs
- Deniece Krebs, CHC | Virtual Clinic
- Sadi Koksoy, DVM, Ph.D, HCLD (ABB) | Cyrex Laboratories
- Vibrant Wellness Labs
- Labcorp
- All of the study participants (and their families!!)

DETOX

Suggested Protocol

- **Digest** | digestive enzymes with meals
- **Protease** | proteolytic enzymes between meals
- **Probiotic** | microflora at bedtime
- **Liver Support** | support formula daily with food
- **L-Drain** | dropper between meals 3-4 x/day

DETOX

S p e c i a l O f f e r s !

10% OFF with Coupon Code **WEBINAR2025**
at www.transformationenzymes.com

20% OFF
L-DRAIN WITH
COUPON CODE
LDRAIN20

BACK in **STOCK**

DETOX

C o m i n g S o o n !



2025 TECSEMINARS WORKSHOP SERIES

The Influence of Enzyme Therapy in 63 Days

Saturday, April 12
Austin, TX

WWW.TECSEMINARS.COM